

Q4 FY2021 (January 31, 2021) earnings call script for March 2, 2021

Louis Gerhardy, Corporate Development & Investor Relations

Good afternoon and thank you for joining our fourth quarter and fiscal year 2021 financial results conference call. On the call today is Dr. Fermi Wang, President and CEO, and Casey Eichler, CFO. We are dialing-in today from different locations, consequently I will cover Casey's prepared remarks and Casey then will be on line for Q&A.

The primary purpose of today's call is to provide you with information regarding our fourth quarter and fiscal 2021 results. The discussion today and the responses to your questions will contain forward-looking statements regarding our projected financial results, financial prospects, market growth and demand for our solutions, among other things. These statements are subject to risks, uncertainties and assumptions. Should any of these risks or uncertainties materialize or should our assumptions prove to be incorrect, our actual results could differ materially from these forward-looking statements. We are under no obligation to update these statements.

These risks, uncertainties and assumptions, as well as other information on potential risk factors that could affect our financial results, are more fully described in the documents that we file with the SEC, including the Annual Report on Form 10-K that we filed on March 27,

2020 for the fiscal year 2020 ending January 31, 2020 and the form 10-Q filed on December 9, 2020 for the third quarter of fiscal year 2021.

Access to our fourth quarter and fiscal 2021 results press release, historical results, SEC filings and a replay and prepared transcripts of today's call can be found on the Investor Relations portion of our website.

Dr. Fermi Wang, President & CEO

Good afternoon and thank you for joining us today.

Our multi-year visual AI investment is the major factor in the accelerated business momentum we are reporting. FY21 revenue of \$223 million was down 3% from the prior year with CV growing significantly - exceeding 10% of total revenue for the year with the video processor business down around 10%. FY21 came with many challenges; the pandemic, geopolitics, and an increasingly tight supply-chain, and these factors remain to varying degrees today. I'm pleased with how we have managed this environment, and as I look into FY22, my goal is to maintain a high level of execution and leverage our leadership position with our differentiated and proprietary visual AI silicon.

Q4 finished the year on a strong note, with revenue 4% above the high end of our guidance range driven by CV, with the number of production CV projects doubling sequentially.

Ambarella's highly focused video and image processing R&D investment, crossed over a cumulative \$1 billion in Q4, with almost half of this amount directed to our proprietary AI technology development. In fiscal year 21 validation of this investment was strong, as more than 175 unique CV customers purchased engineering parts, and/or development systems, including more than 40 reaching production volumes in the year. By the end of the current quarter, we expect to have shipped more than 2 million CV SoCs on a cumulative basis, with more than three hundred thousand CV SoCs shipped into the automotive market. I am extremely proud of our new product execution, as demonstrated by the introduction of our flagship CV5, the first in a family of 5nm AI vision processors.

As we look into FY22, our guidance contemplates supply-side challenges, growth in the organization, an expanding product portfolio and the development of a number of increasingly diverse markets. We remain confident the visual AI market is still in its early stages, and we continue to expect CV to be at least 25% of our total revenue for the year with the video processor business posting moderate growth.

I will now provide an update on our customers and markets.

At the beginning of the year, we introduced our CV5, an artificial intelligence (AI) vision processor capable of recording 8K video or four 4K video streams. The new SoC will enable the development of intelligent automotive camera systems, consumer cameras, and robotic cameras. It combines Ambarella's powerful CVflow AI engine with dual Arm® A76 CPUs to provide the performance necessary for a wide range of AI-based algorithms. Fabricated in the most advanced 5 nm process technology, we believe CV5 sets a new industry benchmark for power consumption, consuming approximately 2 watts of power while encoding 8K video at 30 frames per second or 5 watts at 60 frames per second.

In January Ambarella held its annual customer technology event, during what would have been the live Consumer Electronics Show. Our virtual event was held over a two-week period and included the individual, live hosting of over 200 worldwide customers, spanning automotive, consumer, robotic and IoT markets. Featuring over 30 technology demonstrations with an emphasis on advanced AI applications, the event was a great success, allowing us to keep engaged not just with existing customers, but to meet many new ones that might not otherwise have been able to travel to Las Vegas for a live show.

During the quarter, at the Amazon Re-invent show, AWS announced their new Panorama SDK with support for Ambarella CVFlow SoCs. The Panorama SDK allows device manufacturers to easily build edge computer vision devices for a wide array of use cases across industrial IoT and other segments. Ambarella was chosen as one of only two initial semiconductor partners to build an ecosystem of hardware-accelerated edge AI devices, with our solution targeting intelligent camera designs.

I would now like to take the opportunity to describe some of our customer related highlights from the quarter, starting with the automotive market.

Today, we announced that Motional, a global leader in driverless technology, has selected Ambarella's CVflow® family of AI processors. The processors work with Motional's network of LiDAR, camera, and radar sensors to enable the vehicle's safe operation in diverse and challenging road conditions.

Motional is leading the industry in making driverless vehicles a reality; the company recently became among the first in the world to put driverless vehicles on public roads and announced a landmark agreement with Lyft for the largest deployment of robotaxis on a major rideshare network. The company's driving record includes navigating more than 1.5 million miles in

diverse environments, and providing more than 100,000 public rides with zero at-fault incidents. It has also led the establishment of industry-leading safety standards, having co-published the Safety First for Automated white paper.

Ambarella's CVflow SoCs will be part of the central processing module in Motional's driverless vehicles, providing image and computer vision processing for cameras in the sensing suite, including the front-facing cameras. The CVflow AI engine will enable Motional AI algorithms to perform complex computer vision tasks, such as object detection, classification, and image segmentation, with industry-leading power efficiency. Ambarella's advanced image processing will allow the vehicles to operate in challenging lighting conditions, including low-light and high-contrast situations, while the SoC's H.264 encoding will enable logging of video data from all cameras in the vehicle.

In the Chinese automotive market, the world's largest, we have won a number of driver monitoring and combination driver monitoring plus in-cabin monitoring designs in passenger vehicles. These designs are with leading automotive OEMs and are expected to enter into mass production this year. The designs leverage Ambarella's CVflow AI processing to enable driver safety functions such as detecting distracted or drowsy drivers as well as our SoCs ability

to process RGB-IR images. The designs are based on our CV25 SoCs as well as our new CV28M SoC which we announced in the fourth quarter of last year.

During the quarter Ford introduced a dealer fit dash camera for its European models based on Ambarella's A12AX automotive SoC. Designed by Falcon Electronics, the small form factor wide angle HD camera fits into the rear-view mirror zone of the windscreen without obstructing the driver's view and integrates with Ford's SYNC 3 screen and voice control.

And in China, joint venture *FAW-Volkswagen*, introduced its new CC passenger car with a dealer fit car HD DVR based on Ambarella's A12A SoC.

During the quarter a major home monitoring camera maker entered into mass production of a new class of intelligent camera based on our CVflow SoCs. Ambarella is beginning to see significant CV growth in home security cameras. Customers' requirements for cameras with higher quality alerts, realized with advanced hardware designs and more sophisticated algorithms for object detection, motion detection, and package protection, are driving the adoption of Ambarella CVflow SoCs.

In January, Alarm.com released its Touchless Video Doorbell, eliminating the need to physically press a doorbell button. The doorbell recognizes when a person stands on your doormat, and sends a mobile alert, allowing you to see and talk to your visitor from wherever you are. Based on Ambarella's S5L, it includes 150-degree vertical field of view to allow viewing of packages, full HD resolution, IR night vision and HDR processing.

Also during the quarter, Logitech launched its Circle View Wired Doorbell, the first consumer doorbell to include Apple HomeKit Secure Video. The doorbell leverages user's existing iCloud storage for video recording without paying a separate subscription and provides a seamless viewing experience with the Home app on iPhones, Apple Watch or other Apple devices. The doorbell is based on Ambarella's S5LM SoC.

In the professional IP security camera market, Ambarella has continued to benefit from customers migrating from HiSilicon to our solutions and from widespread adoption of SoCs based on our CVflow AI architecture.

During the quarter, Dahua, the world's second largest security camera maker, continued its migration to Ambarella, with multiple product launches. For Intelligent Transport Systems

products, our CV2 SoC is being used for 3, 5 and 9M ITS cameras. In IP cameras, our CV22 and CV2 SoCs are now shipping for 4M and 8M designs with advanced analytics.

Korean market leader Hanwha Techwin further extended its portfolio of Ambarella-based IP security cameras, including a new 3-channel multi-directional camera based on our CV22 CVflow SoC, a new 4-channel panoramic camera based on our flagship CVflow CV2 SoC, and a new 5Mpixel corner mount model based on our S3L63 SoC.

Also during the quarter, IDIS, Korea's second largest camera supplier, introduced three new camera families based on our CVflow CV22, S5L, and S3L SoCs. The new cameras include fisheye, 5MPixel and 8Mpixel models and leverage intelligent Codec capabilities to reduce network bandwidth and storage requirements.

In Europe, German IP-camera specialist Dallmeier introduced its new Panomera S camera, based on CV22. By combining several lenses and sensors with different focal lengths, the Panomera-S is able to capture remote and middle areas with the same high resolution as scenes in the foreground.

We are continuing to see opportunities in new classes of sensing cameras spanning multiple vertical applications, such as access control, occupancy monitoring and retail analytics. During this quarter, Genius Pro, a leading provider of 3D Time-Of-Flight sensor systems, introduced a people counting camera targeting transport and building monitoring applications. Based on our CV25 CVflow SoC, it includes both a visible CMOS sensor and a ToF sensor, with CV25 performing sensor fusion and AI processing to provide high accuracy people counting.

In summary, we are leveraging our successful video processor heritage into the development of a highly optimized visual AI family of SoCs. In essence, our addressable market is expanding beyond human viewing applications, to include the installed base of machines that can now use our CV SoCs to visually perceive their environment and make decisions, leading to higher levels of autonomy and eventually automation. The adoption of our expanding family of visual AI silicon into increasingly diverse markets, including pure machine sensing, as demonstrated by the Motional announcement today, is in the early stage but is taking shape, and as this adoption drives revenue growth, we expect to continue to deliver positive earnings leverage to shareholders.

In our earnings call on June 4, 2019 we provided guidance on the anticipated shape of the first 3 waves of CV revenue. We stated Wave 1, professional security, would become material in CY20, Wave 2, home security, would become material in CY21, and Wave 3, automotive,

would become material in the CY22/CY23 timeframe. We achieved our Wave 1 goal in the last year, and I'm confident we are on track to achieve Wave 2 and 3 in their respective timeframes. The last CV wave, automotive, is firmly on-track, as we have indicated with our communication last quarter on our automotive revenue funnel, and in FY22, driven by CV, we anticipate our auto business will grow at a rate that is significantly higher than the other businesses. This is important as our automotive SAM is estimated to be about two-thirds of our total SAM in FY22, or more than \$3B, growing to almost \$7B in FY26.

The megatrends for security, safety and automation are very favorable, and to address these secular growth forces, we continue to build our team globally to support the rising interest in our CV SoCs from existing and new markets. I would like to thank all of our employees for their contribution to our leadership position in the market, and for their execution in the turbulent environment. And thanks to all our other stakeholders for your continued support.

I will now turn the call over to Louis who will give you more details about what we are seeing and expect for the business.

Louis Gerhardy, Corporate Development & Investor Relations

I will review the financial highlights for the fourth quarter and the full fiscal year 2021, ending on January 31, 2021, and provide a financial outlook for our first quarter of fiscal year 2022, ending on April 30, 2021.

I'll be discussing non-GAAP results and ask that you refer to today's press release for a detailed reconciliation of GAAP to non-GAAP results. For non-GAAP reporting, we have eliminated stock-based compensation expense adjusted for the impact of taxes.

Despite the pandemic, geopolitical and supply-chain challenges, revenue in fiscal year 2021 decreased 3% to \$223 million, as a strong CV product ramp offset much of the headwinds. For the year, Security camera revenue represented about 60% of revenue with the balance roughly split between automotive and Other. For fiscal year 2021, non-GAAP gross margin was 61.4% up from 58.5% in FY20, driven primarily by a richer product mix as two of our professional security camera customers in China had an anticipated reduction in their safety stock. Non-GAAP operating expenses increased 10%, primarily due to a \$10 million increase in R&D. Our cash flow from operations was \$30.8 million for the year. With no debt, net cash and marketable securities totaled \$440.7 million.

Driven by CV products, Q4 revenue of \$62.1 million was 4% above the high-end of our guidance range of \$56 million to \$60 million. These results represent an increase of 11% from Q3 and an increase of 9% when compared to the same quarter a year ago. Auto revenue increased more than 20% sequentially and year-over-year. Security camera sequential growth was about 20% and began to grow again on a year-over-year basis after the anticipated trough in Q3. Other revenue experienced a seasonal decline.

Non-GAAP gross margin for Q4 was 61.4%, slightly above the high-end of our guidance range of 59% to 61%. As anticipated, gross margin declined 129 basis points from the prior quarter due to the product and customer mix in the quarter.

Non-GAAP operating expense for the fourth quarter was \$33.4 million, compared to \$32.4 million in Q3. This was slightly above the high-end of our guidance range of \$31 to \$33 million.

Other income was \$0.6 million and primarily represented interest income on our cash and marketable securities.

Non-GAAP net income for Q4 was \$5.1 million, or \$0.14 per share compared to \$3.3 million, or \$0.09 per share in the third quarter. The non-GAAP effective tax rate in Q4 was 4% as the distribution of profits shifted toward lower rate jurisdictions.

In the fourth quarter, the non-GAAP earnings per share were based on 37.6 million shares.

Total headcount at the end of the fourth quarter was 785 with about 81% of employees dedicated to engineering, most of whom are focused on software. Approximately 69% of our total headcount is located in Asia.

In Q4 we generated positive operating cash flow of \$12.5 million. Total accounts receivable at the end of Q4 were \$25.0 million or 37 days sales outstanding. This compares to accounts receivable of \$24.1 million or 39 days sales outstanding at the end of the prior quarter. Net inventory at the end of the fourth quarter was \$26.1 million compared to \$23.7 million at the end of the previous quarter. Days of inventory decreased to 93 days in Q4 from 102 days in Q3.

We had two 10% plus revenue customers in Q4. WT Microelectronics, a fulfillment partner in Taiwan who ships to multiple customers in Asia, came in at 68.4% of revenue and Chicony, a Taiwanese ODM who manufactures for multiple customers, primarily U.S. based, came in at 13.8%.

I will now discuss the outlook for the first quarter of FY22:

We continue to have strong design activity in all of our markets. As you have heard, the semiconductor industry supply-chain has become increasingly tight, and it is now very difficult to support customers who place orders inside our lead times, which have been increasing. In addition, the Texas freeze impacted one of our vendors operations, and while they are in the process of returning to operation, we do not yet know the final impact. To the best of our ability, at the current time, our guidance contemplates these supply-side dynamics.

Despite these challenges, with multiple CV programs ramping production, we expect to perform better than the typical downward seasonal trend in Q1 with revenue anticipated in the \$67 to \$70 million range, or up 8% to 13% sequentially. Auto revenue is anticipated to increase more than 20% sequentially with Security up in the low to mid-teens sequentially, with Other down about 20% sequentially.

We continue to monitor the outstanding geopolitical challenges including the risk of a dual supply chain and what that means for our ability to continue to supply our customers in China.

In our prior earnings calls we estimated two professional security camera customers in China had pulled-in roughly \$10 million of video processor revenue from FY21 into FY20. We believe this video processor inventory correction is largely complete, with these two customers combined representing a low teens percent of our total revenue in Q4. As discussed in our November 23rd earnings call, and as Fermi described today, Dahua commenced mass production of multiple products in Q4 with several of our CV SoCs.

We estimate Q1 non-GAAP gross margin to be between 59.5% and 61.5% compared to 61.4% in the fourth quarter. Our guidance considers some higher costs and expenses we are incurring to expedite orders and secure more capacity.

We expect non-GAAP OPEX in the first quarter to be between \$34 and \$36 million, with the increase from Q4 primarily coming from increased engineering headcount, payroll tax accruals, and other engineering expenses.

The Q1 non-GAAP tax rate should be modeled at 10% versus 4% in Q4.

We estimate our diluted share count for Q1 to be approximately 37.8 million shares.

Ambarella will be participating in the Morgan Stanley TMT conference tomorrow, March 3rd, Berenberg's American Innovation Seminar on March 4th, Baird's Vehicle Technology & Mobility Conference March 10th, the ROTH Conference on March 15th, and Bank of America's Auto Summit on March 30th. Please contact us for more details.

Thank you for joining our call today, and with that, I will turn the call over to the operator for questions.

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