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# Evercore ISI ADAS, AV & AI Summit

55 East 52nd Street, New York, NY

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# Forward-Looking Statements

This presentation contains forward-looking statements that are subject to many risks and uncertainties.  All statements made in this presentation other than statements of historical facts are forward-looking statements, including, without limitation, statements regarding Ambarella's strategy, future operations, financial targets, future revenues, projected costs, prospects, plans and objectives for future operations, future product introductions, future rate of our revenue growth, the size of markets addressed by the company's solutions and the growth rate of those markets, technology trends, our ability to address market and customer demands and to timely develop new or enhanced solutions to meet those demands, our ability to achieve design wins, our ability to build and deliver products to customers, and our ability to retain and expand our customer and partner relationships.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential," or the negative of those terms, and similar expressions and comparable terminology intended to identify forward-looking statements. We have based forward-looking statements largely on our estimates of our financial results and our current expectations and projections about future events, markets and financial trends that we believe may affect our financial condition, results of operations, business strategy, short term and long-term business operations and objectives, and financial needs as of the date of this presentation. Although these forward-looking statements are based upon information available at the time the statements are made and reflect management's good faith beliefs, forward-looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements to differ materially from anticipated future results.  Important factors that could cause actual results to differ materially from expectations are disclosed in Ambarella's annual reports on Form 10-K and quarterly reports on Form 10-Q filed with the Securities and Exchange Commission (the "SEC"), particularly in the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."  You should not place undue reliance on forward-looking statements, which speak only as of the date on which they are made.  We do not undertake to update or revise any forward-looking statements after they are made, whether as a result of new information, future events, or otherwise, except as required by applicable law.  Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this presentation may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

Before you invest, you should read the annual and quarterly reports and other documents Ambarella has filed with the SEC for more complete information about the company and its ordinary shares. Additional information will also be set forth in Ambarella's future quarterly and annual reports and other filings made with the SEC from time to time. You may access these documents for free by visiting EDGAR on the SEC web site at www.sec.gov.

# Ambarella Overview
## Advanced deep learning AI inference hardware and software

**Santa Clara, CA**
*Company HQ* · Detroit · Munich · Parma *VisLab* · Shanghai · Seoul · Dayton · Tokyo · Hsinchu · Shenzhen

**Ambarella 925+**
HEADCOUNT

### Timeline

**2024**
~25M AI SoCs shipped cumulatively

**2021**
Acquisition of **OCULii**

**2015**
Acquisition of **VISLAB .iT**
*Extend Your Vision*

**2012**
IPO, NASDAQ: **AMBA**

**2004**
Ambarella founded

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**Founded on the premise that video is a unique type of data requiring an optimized SoC architecture**

- Ambarella's deep neural network AI inference processor integrated with a state- of-the-art video & radar perception yields highly optimized domain controller SoCs
- VisLab, a pioneer in CV and autonomous driving software, acquired in 2015
- Oculii, a pioneer in high-definition radar perception technology, acquired in 2021

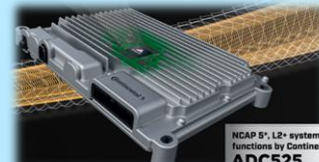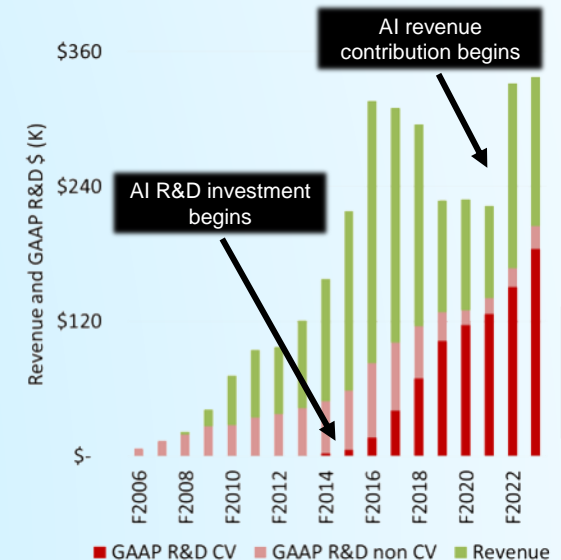**World-class engineering team**

- **~500** software, algorithm and image processing engineers globally
- **2nm** in development**, 5nm** in mass production**, 10nm** ~60% of revenue
- **>10yrs** of flawless VLSI execution with step "A" silicon into production

**Computer vision a majority of AI revenue today. New product waves, in particular for advanced AI networks, anticipated from CV5, CV7 and CV3 families, respectively.**

- Low-power and high-performance SoCs for auto and IoT markets
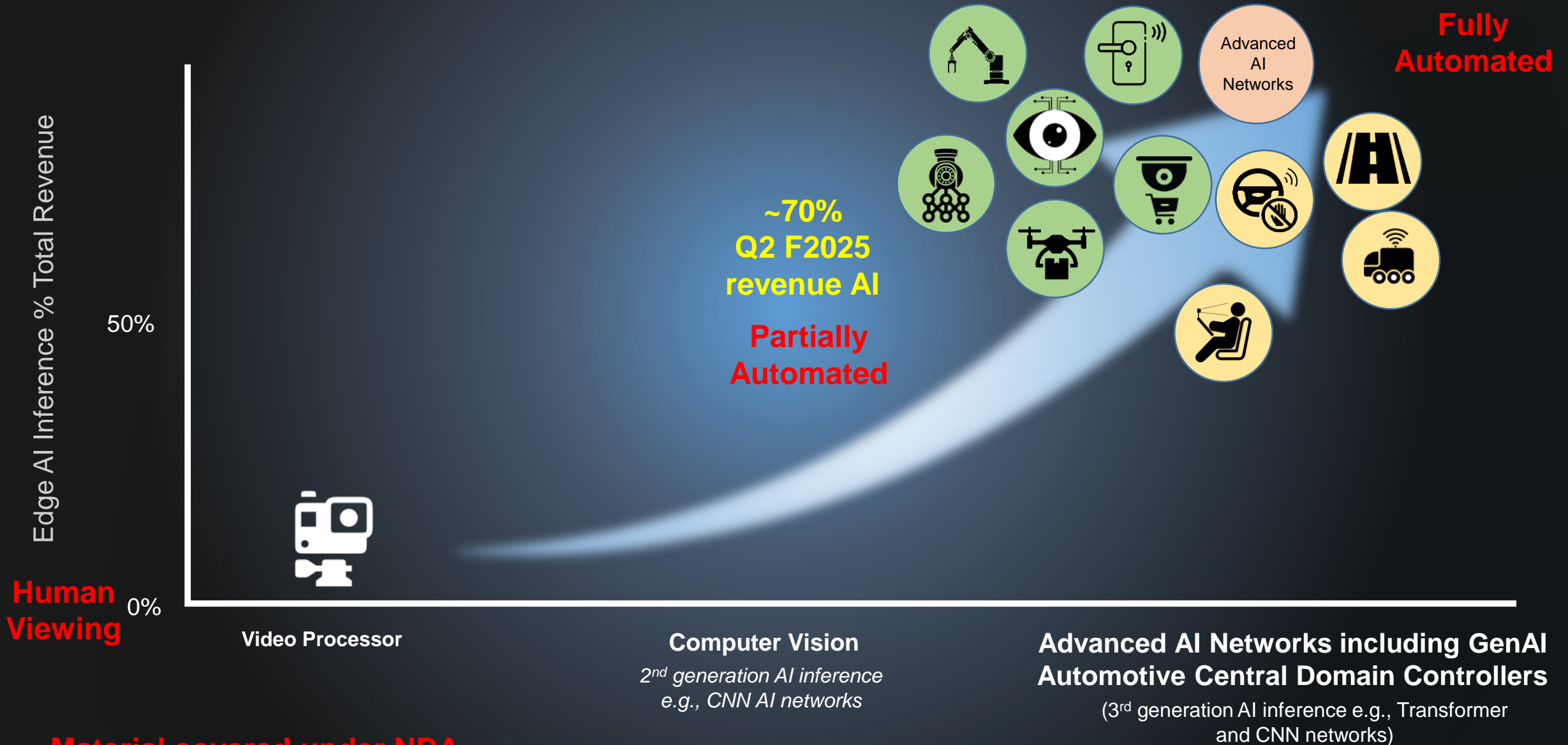- Scalable family allows SW to be reused across a customer's portfolio

**Significant R&D investment funded by operations and strong balance sheet**

- >$1 billion cumulative R&D investment into AI

**AI revenue contribution begins**

**AI R&D investment begins**

Revenue and GAAP R&D $ (K)
$360 — $240 — $120 — $-
F2006 F2008 F2010 F2012 F2014 F2016 F2018 F2020 F2022

■ GAAP R&D CV ■ GAAP R&D non CV ■ Revenue

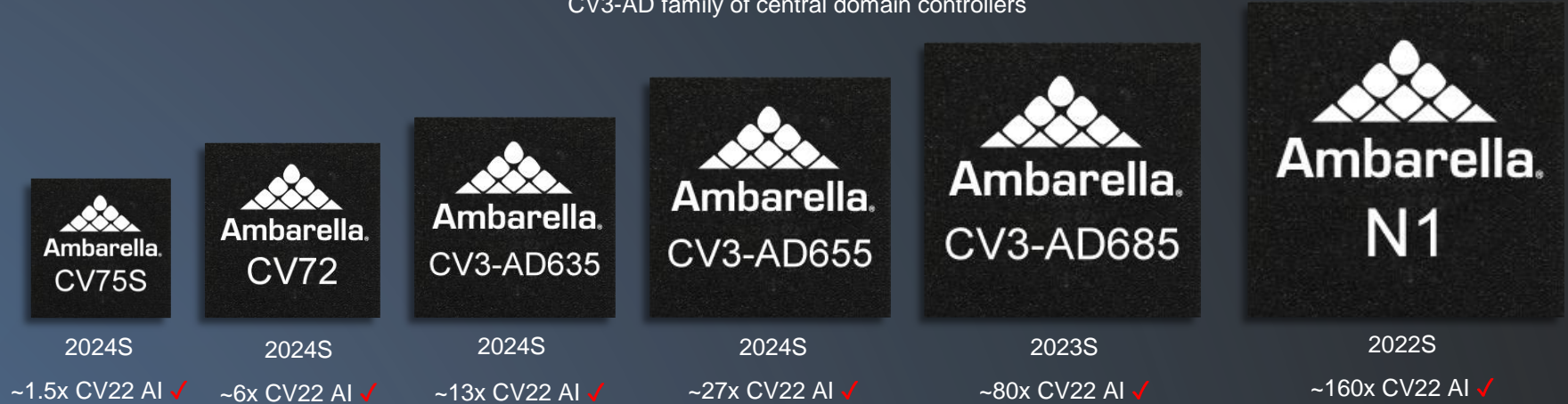# Scalable Deep Learning AI Inference Processor Portfolio

*Superior AI performance per Watt*

5nm Samsung

**SAM**MOBILE Samsung to make 2nm chips for AI firm Ambarella

CV3-AD family of central domain controllers

**AI Inference SoCs**

## 3rd generation AI
(e.g., Transformer and CNN AI networks)

| Ambarella CV75S | Ambarella CV72 | Ambarella CV3-AD635 | Ambarella CV3-AD655 | Ambarella CV3-AD685 | Ambarella N1 |
|---|---|---|---|---|---|
| 2024S | 2024S | 2024S | 2024S | 2023S | 2022S |
| ~1.5x CV22 AI ✓ | ~6x CV22 AI ✓ | ~13x CV22 AI ✓ | ~27x CV22 AI ✓ | ~80x CV22 AI ✓ | ~160x CV22 AI ✓ |

10nm Samsung

## 2nd generation AI
(e.g., CNN AI networks)

| Ambarella CV28 | Ambarella CV25 | Ambarella CV22 | Ambarella CV22FS | Ambarella CV2 | Ambarella CV2FS | Ambarella CV5/52 |
|---|---|---|---|---|---|---|
| Feb 2021P | Jul 2019P | Dec 2018P | Apr 2021P | Aug 2019P | Apr 2021P | 2022P |
| ¼ of CV22 AI | ½ of CV22 AI | Baseline (CVflow DNN AI) | | 4x CV22 AI | 2x CV22 AI | 3.5x CV22 AI ✓ |

## Human Viewing

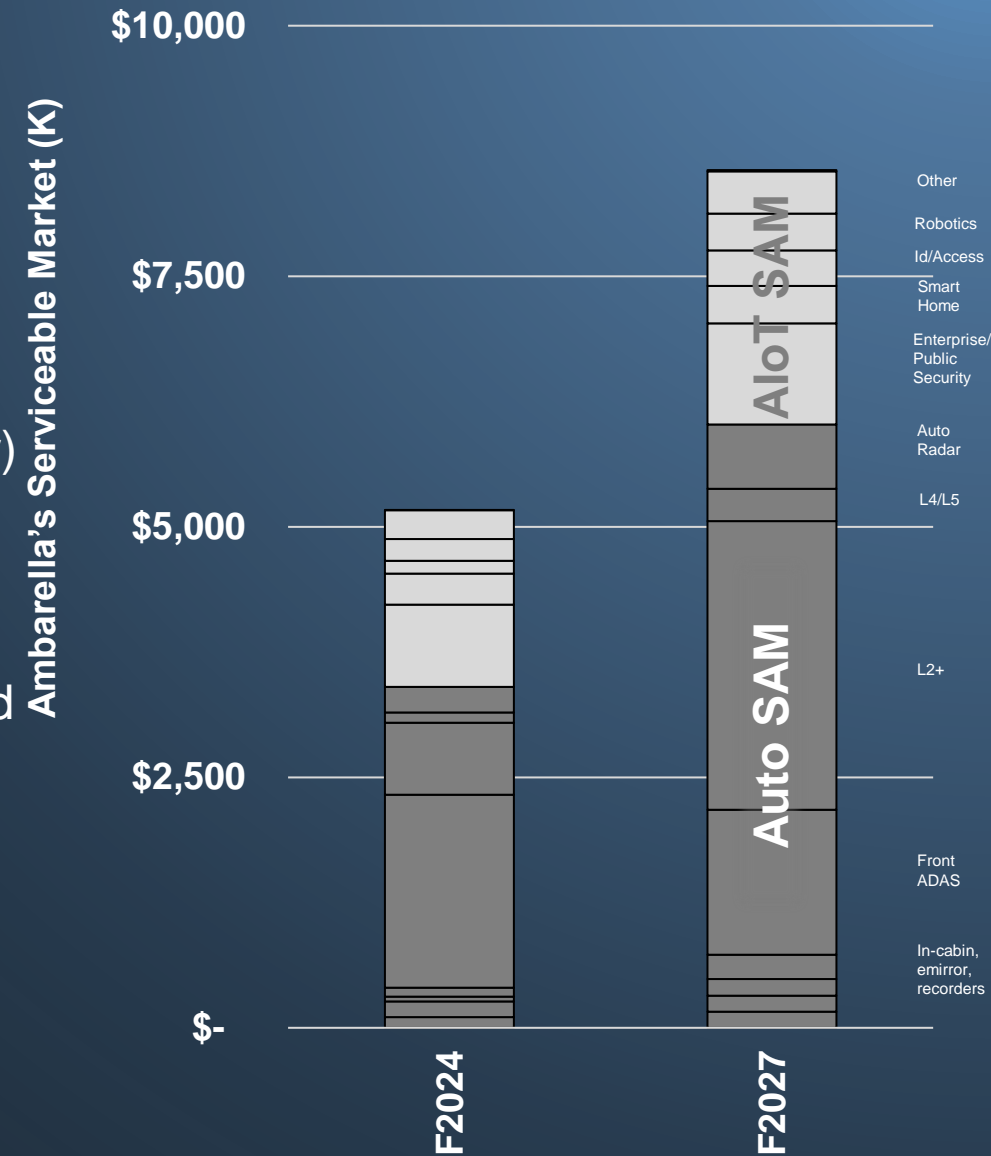| Ambarella H22 | Ambarella S5L | Ambarella H12 | Ambarella S3L | Ambarella A12 | Ambarella S2L |
|---|---|---|---|---|---|
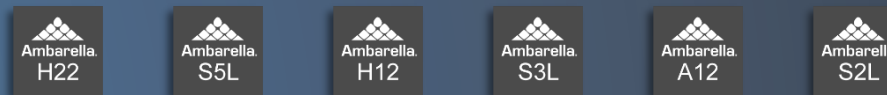
"New Products" ✓
20xx = Calendar Year
P = Production
S = Sample

# Large and Growing Markets

*Serviceable market ("SAM") revenue CAGR in the high teens*

- **F2024 revenue was ~34% Auto and ~66% IoT**

- **F2028 revenue SAM estimate ~70% Auto and ~30% IoT**

- **We are focused on AIoT edge applications,** including both edge endpoints and edge infrastructure systems (e.g., AI box, edge server)

- **We address the megatrends of security, safety, and automation**

- **Key driver is to enable electronic systems to perceive the world and make intelligent decisions**; human viewing business expected to decline as a proportion of revenue

- AI has triggered **new product cycles** in existing IoT markets and opened **entirely new opportunities** in the auto and IoT markets

  - Advanced AI networks, including GenAI, are expected to be an important new product cycle

- *SAM estimates do not include autonomous driving software, advanced networks nor Generative AI ("GenAI")*

Ambarella's Serviceable Market (K)

$10,000
$7,500
$5,000
$2,500
$-

AIoT SAM

Auto SAM

Other
Robotics
Id/Access
Smart Home
Enterprise/ Public Security
Auto Radar
L4/L5
L2+
Front ADAS
In-cabin, emirror, recorders

F2024

F2027

Source: Ambarella, ABI, Gartner, IHS, Strategy Analytics, TSR

# Automotive Applications
*(~34% of fiscal 2024 revenue)*

| | Visualization — Human Viewing + Recording | ADAS — Sensing + Viewing + Recording | | Autonomous Driving — Part-time | Full-Time |
|---|---|---|---|---|---|
| | **Dataloggers, Drive Recorders** (pre-install, dealer-fit, aftermarket) | **Front ADAS** (front facing camera L0 to L2) | **Other ADAS** (emirror, in-cabin (DMS, OMS) access, personalization) | **L2+** | **L4** |
| **C2023 market penetration** (% of new vehicles produced globally) | ~15% | ~70% | ~1% other ~4% emirror ~15% in-cabin | ~3% | ~0.1% |
| **C2023 → C2027 Ambarella SAM*** | $275M → $400M | $1.6M → $1.3B | $200M → $500M | $500M → $2.5B | $200M → $900M |
| *does not include SW stack* | | | | | |
| **Ambarella Processors** | Human Viewing | 2nd Generation AI | | 3rd Generation AI | |
| **Other Ambarella Products** | | | | **CV3-AD Platform includes:** CV3-AD SoCs • 4D radar perception SW • End-to-end AI SW Stack | |

Application / Products

# Ambarella's Oculii 4D Imaging Radar Technology

**Oculii Edge 4D Imaging Radar** ➡️ **Oculii Centralized 4D Imaging Radar**



**Lotus Deploys Ambarella's Oculii™ AI 4D Imaging Radar Technology in L2+ Semi-Autonomous Systems for Eletre SUV and Emeya Hyper-GT Electric Vehicles**

*Lotus Achieves Ultra-Long-Range Detection of Over 300 Meters With High Angular Resolution for Automated Safety and Autopilot Features at Racetrack Speeds Using Fewer Radar Antennas*
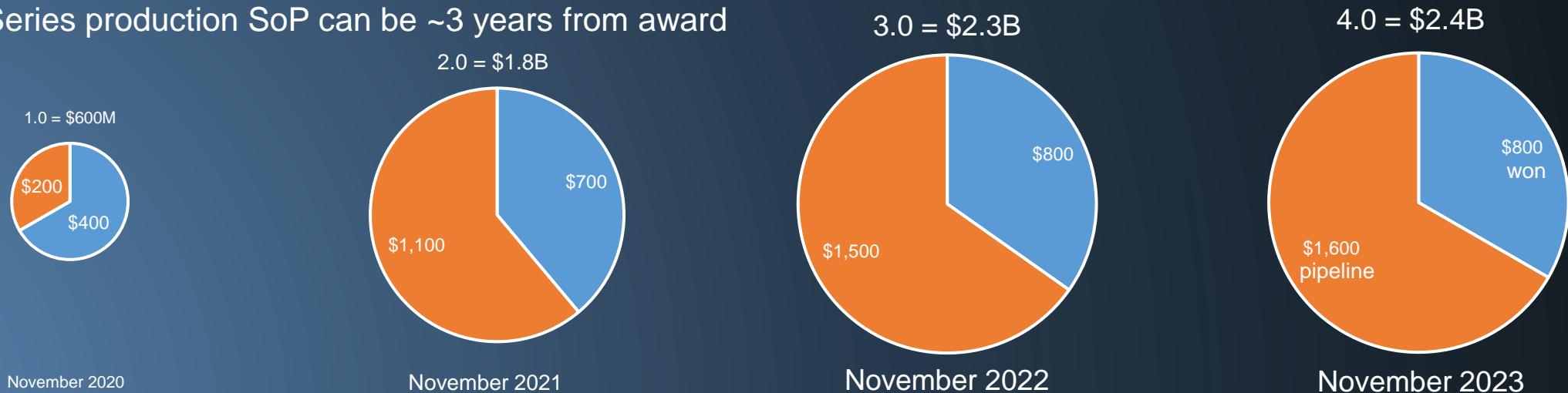
SANTA CLARA, Calif., Sept. 24, 2024 — Ambarella, Inc. (NASDAQ: AMBA), an edge AI semiconductor company, today announced in advance of AutoSens Europe that its Oculii™ AI 4D imaging radar technology is deployed worldwide in the 2023 and 2024 Lotus Eletre electric hyper-SUV as well as the 2024 Lotus Emeya fully electric hyper-GT from Lotus Technology. The vehicles' L2+ semi-autonomous systems that have benefited from this groundbreaking radar technology include highway and urban navigation on autopilot (NOA) and automatic emergency braking (AEB), where the ultra-long detection
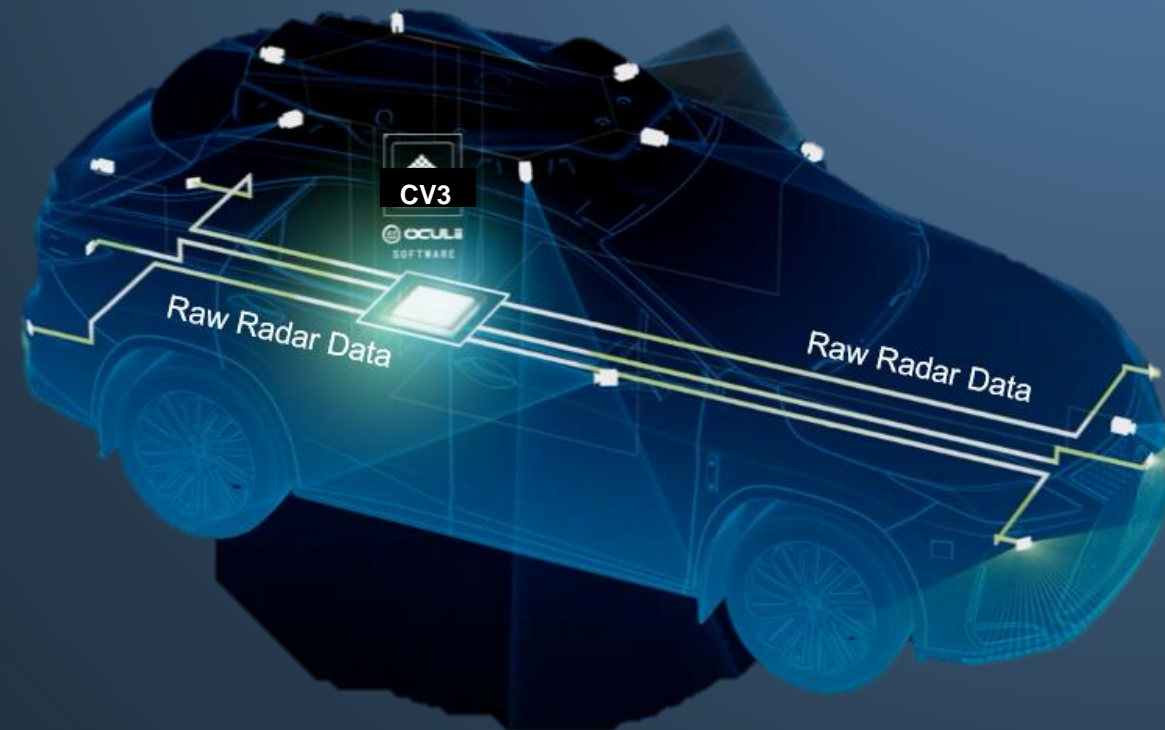
# 6-Year Automotive Revenue Funnel 4.0 ~$2.4B

*Consistent methodology: <u>Won</u> = notified of award with 1 discount factor   <u>Pipeline</u> = in the bidding process with 2 discount factors (1) confidence in customers revenue forecast for a project and (2) probability of winning a project*

- **Our auto business generated about $77 million of revenue in F2024 and our six-year $2.4 billion funnel is an indication of the strong revenue growth we anticipate from the auto market**
  - >90% funnel is AI and a large portion of the AI is CV3

- **Significant revisions between funnel 4.0 and funnel 3.0**
  - There were a significant number of revisions to the prior funnel including changes in OEM/T1 forecasts and project delays, projects won or lost and the addition of new projects

- **Distribution of funnel revenue is exponential in shape**
  - Assumptions for auto funnel ASP to rise with time
  - Rising adoption of new technologies in vehicles produced
  - Series production SoP can be ~3 years from award

1.0 = $600M

$200
$400

November 2020

2.0 = $1.8B

$700
$1,100

November 2021

3.0 = $2.3B

$800
$1,500

November 2022

4.0 = $2.4B

$800
won
$1,600
pipeline

November 2023

# AIoT Applications

*(non-auto AIoT applications represented ~66% of fiscal 2024 revenue)*

## AIoT

*(Cells scaled to proportionally approximate F2024 AIoT revenue distribution)*

### "Security"

### Other

-Access Control
-Drone
-Handheld Smart Imaging
-LLMs
-Multi-modal
-Robotics
-Videocon.
-VR
-Wearable

### Enterprise "Security"

### Home Security

- **IoT historically camera-based human viewing and endpoints**
  - $2^{nd}$ gen AI SoCs now a majority of revenue and typically process CNN networks, enabling machine sensing + human viewing → ~CV2 ASP 2x video processor ASP
  - $3^{rd}$ gen AI SoCs add transformer network processing support. Expected to enable entirely new applications, potentially expanding SAM deeper into the network → further increase in ASP anticipated

- **Enterprise currently the largest security market**
  - Global installed base in C2023 estimated to be 1.1 billion cameras with <10% based on embedded deep learning SoCs
    - Installed base growing low single digits Y/Y (AI a key driver)
    - Annual unit demand heavily influenced by replacement units (AI a key driver)
  - Consistent with our revenue, we estimate a majority of the installed base is represented by enterprise + public capital expenditures, the balance home spending

- **Other AIoT includes emerging advanced AI networks (e.g. CLIP, VLM, LLM, GenAI, multi-modal) and legacy**
  - $2^{nd}$ gen and $3^{rd}$ gen AI SoCs are enabling entirely new applications, including access control, consumer cameras, fixed and mobile robotics and virtual reality
  - GenAI represents both a new product cycle and an extension into new markets as larger models can be condensed into smaller, more efficient models at the edge
    - N1 serves the "missing middle" for 3B to 50B parameter models such as Llama-v2, Gemma, Phi-2 and CLIP in network infrastructure HW
    - CV7 family addresses <3B parameter models including within an endpoint
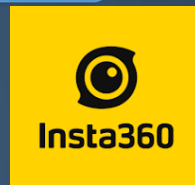
# Q3 (October) F2025 Outlook and Q2 (July) F2025 Recap
*Q3 fiscal 2025 outlook and Q2 fiscal 2025 results provided August 27, 2024*

## Q3 F2025 (October, 2024) Outlook
- Our Q3 revenue guidance is $77.0M to $81.0M (consensus estimate ~$69.1M on Aug. 26th) with double-digit sequential growth expected in both AIoT and Auto
- For F2025, we expect total revenue growth in the mid to high teens percent (consensus estimate on August 27th  $250.1M)
- Q3 non-GAAP gross margin estimated to be 62.5% to 64.0% (consensus 62.8%) with non-GAAP operating expense $49.0M to $51.0M (consensus $49.8M)

## Q2 F2025 (July, 2024) Results
- Revenue of $63.7M was the high-end of our guidance range of $60.0M to $64.0M (consensus estimate ~$62.1M)
- Non-GAAP gross margin was 63.3% versus the consensus estimate of 63.2% and non-GAAP operating expense was $47.7M (consensus $48.5M)
- Non-GAAP loss per share was $0.13 versus the consensus estimate for a loss per share of $0.19

## Multi-year transformation underway; geopolitical risks remain elevated
- AI is becoming pervasive, we are embedding it in all our new products and we have growing evidence of market acceptance
- We see a wide variety of risks outstanding, including geopolitical and supply chain factors.  These risks include*:
    - potential export regulations on advanced technologies
    - market share shifts between our customers
    - the evolution of new markets and rates of adoption of new technologies
    - supply chain issues such as long lead times, shortages of materials, components, electricity and manufacturing capacity, the sell-out from our customers own sales channels and adverse weather conditions
    - changes to tariffs and/or the Entity List
    - the risk customers in China continue to take actions to reduce their dependence on components they believe could be subject to new export controls, including the creation of dual China/non-China supply chains

*\*Potential risk factors that could affect our financial results are more fully described in the documents that we file with the SEC, including annual reports on Form 10-K and quarterly reports on Form 10-Q.*

# Thank you!

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