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Piper Sandler Growth Frontiers Conference

Nashville, TN

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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

Ambarella
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>50M

Edge AI SoCs Shipped

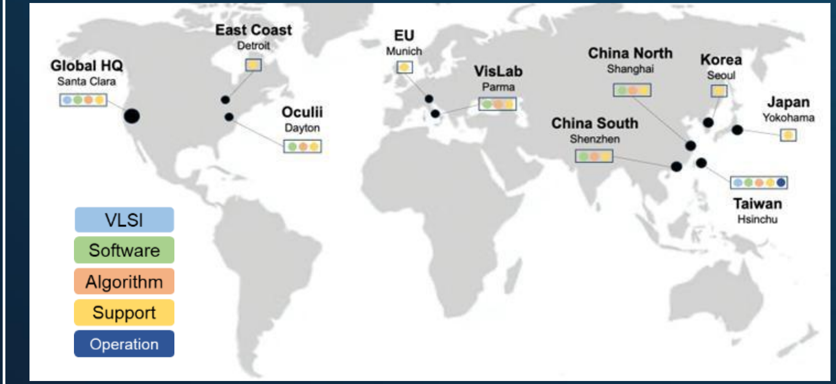
(Cumulatively as of July 31, 2026)

Macnica & Capgemini LTAs

$108.1M Q2 revenue

"We are making significant progress with our strategic priorities to extend our market reach with new higher value products and the implementation of new go-to-market strategies. These include the introduction of our first stand-alone AI Accelerator, X7, and the execution of 7-year agreements to develop the indirect sales channel with both Macnica, a leading global technical distributor, and CapGemini, a leading global engineering and systems integration firm. These developments are contributing to an increase in our 5-year serviceable market ("SAM") forecast for edge AI and Physical AI."

- Fermi Wang, President & CEO | September 3, 2026

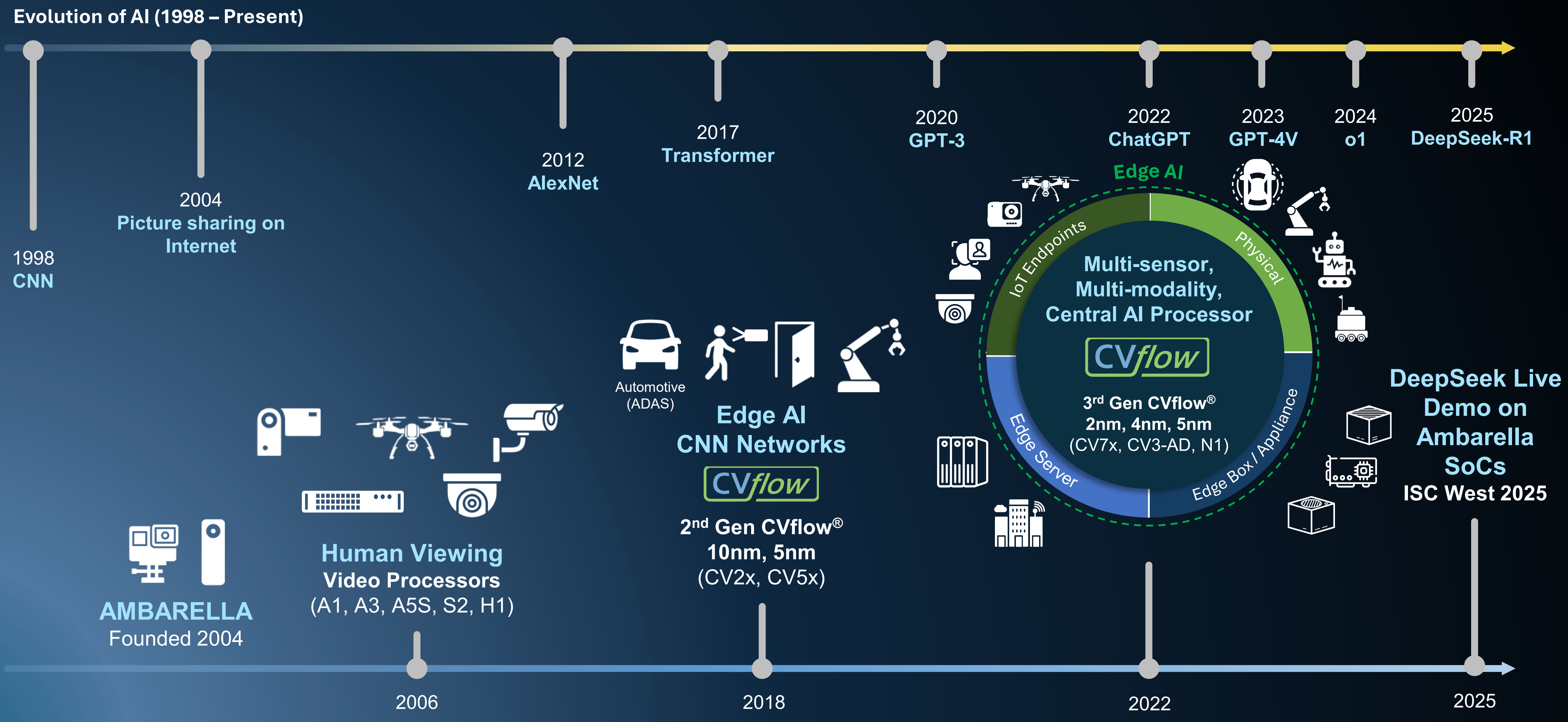


- **Edge AI a majority of revenue**
- **~950 employees worldwide**
- **Fabless, 5nm >40% revenue**
- **NASDAQ IPO 2012**
- **Founded 2004**

Ambarella's Edge Entering the Golden Age of AI

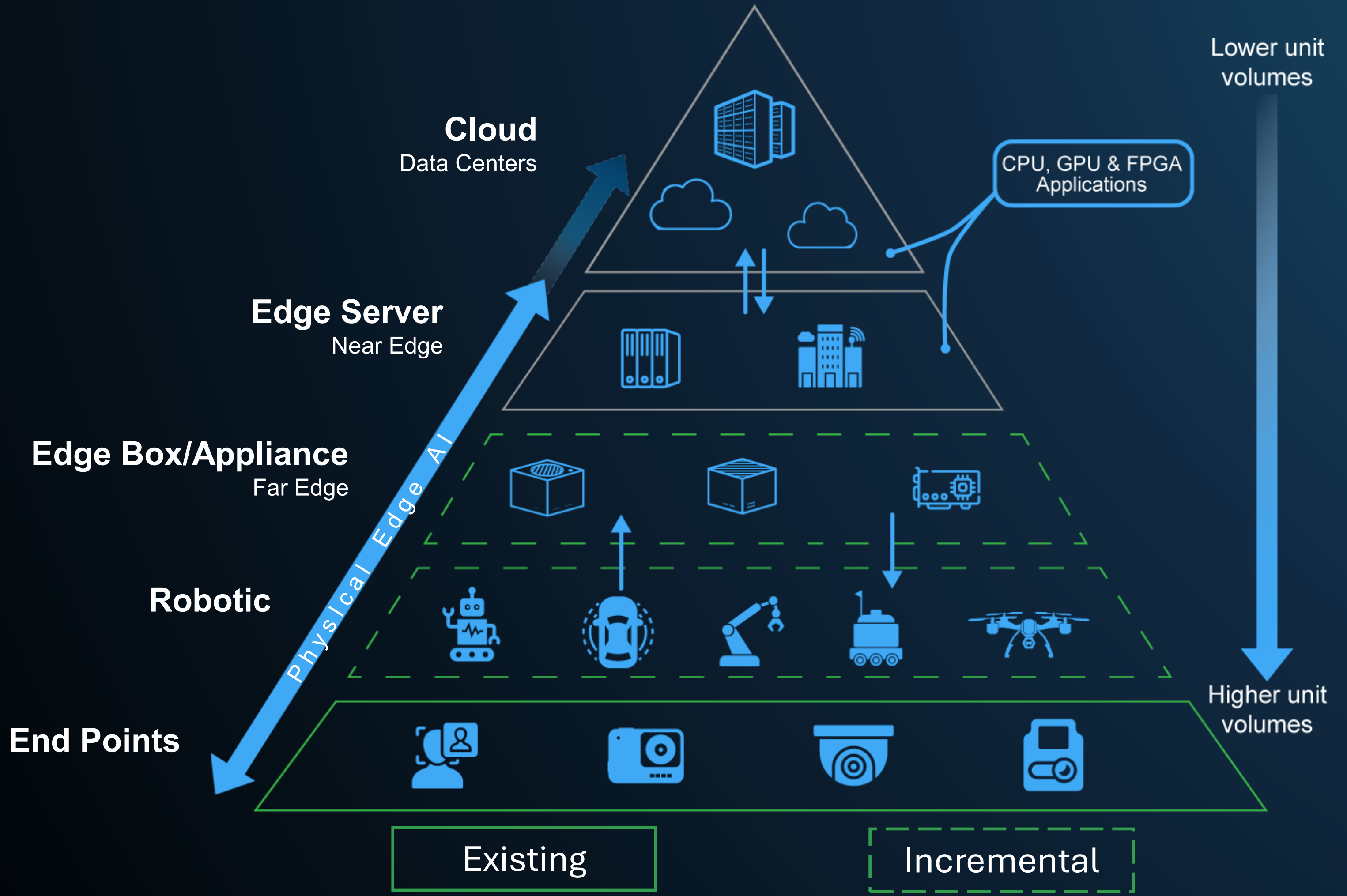
Early conviction and sustained innovation position Ambarella to lead the next era of edge intelligence

Ambarella
AI envisioned™



Edge AI Demands a Fundamentally Unique Processing Architecture

Higher levels of efficiency and new capabilities enabled with edge AI

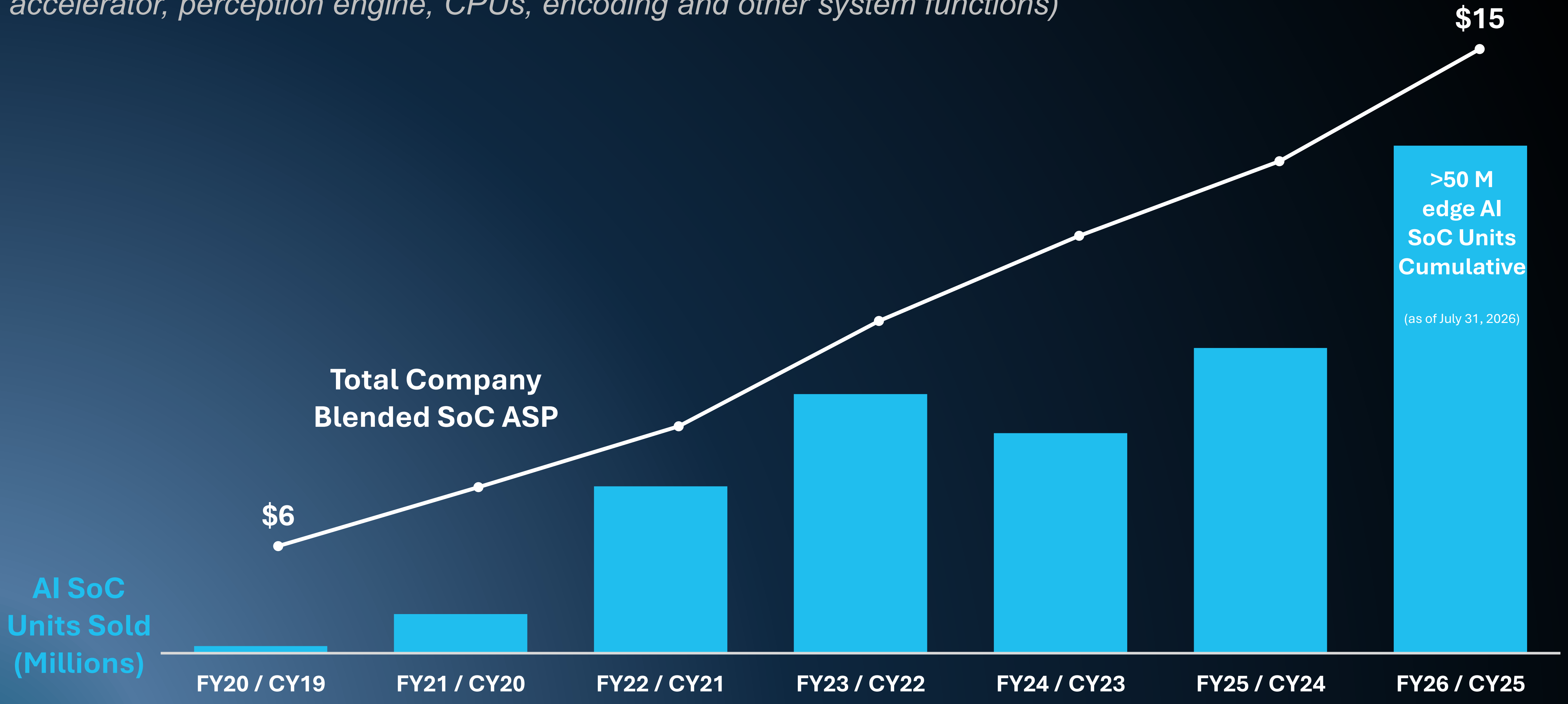


Edge AI enables:

- Privacy and security
- Realtime processing
- Reduced network bandwidth requirement
- Low power consumption
- Synergies between cloud and edge AI processing – AI processing throughout the network hierarchy

SoC ASP Has Increased Over Time with AI Workload Complexity

Ambarella's edge AI SoCs integrate into a single SoC the key accelerated computing functions (AI accelerator, perception engine, CPUs, encoding and other system functions)



We Are Capturing More Value per Edge AI Unit

Ambarella's SoC average selling price increased ~15% in F2026 vs F2025

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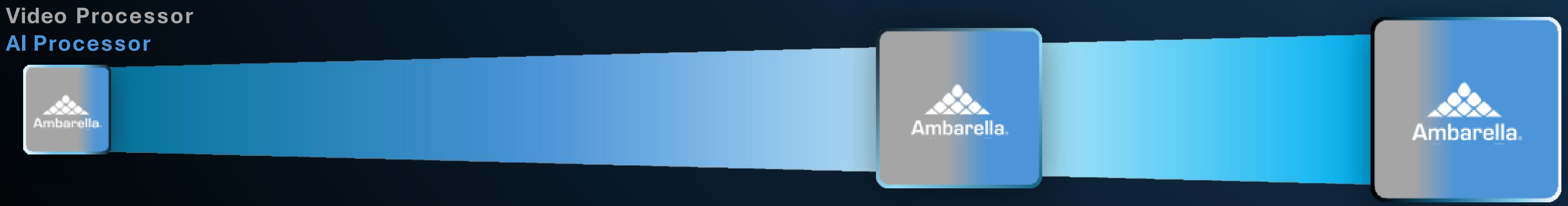
1. Serial CPU workloads → parallel AI workloads = more edge AI "horsepower" required
2. Workloads moving from the Cloud and Data Center to the Edge
3. Larger AI models = more parameters and data to be supported
4. Continued support for CNN networks but incremental processing required for the more sophisticated transformer network applications
5. Higher resolution sensors = more data per sensor more sensors per system = more data per system

More edge AI performance, intelligence and efficiency required

AI accelerator becoming a larger and larger proportion of our AI SoCs

All of Ambarella's new edge AI SoCs in development are expected to command an ASP well above the current ASP

Growing importance and proportion of edge AI inference processing in our SoCs



Cooper Development Platform

Edge AI technology leadership, comprehensive AI SoC product portfolio, market acceptance and well-established nature of our entire AI platform (AI SoC + SW development platform)

Broad Edge AI SoC Portfolio Continues to Expand

Our ASP is Rising with New Generations of our AI SoCs

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Scalable Family from 1-600x AI Performance

AI Inference SoCs

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

ASP double digits to triple digits

5nm Samsung:
- Ambarella CV75S — 2025P ~6x AI ✓
- Ambarella CV72 — 2025P ~24x AI ✓
- Ambarella CV3-AD635 — 2026 ~50x AI ✓
- Ambarella CV3-AD655 — 2026S ~100x AI ✓
- Ambarella CV3-AD685 — 2023S ~300x AI ✓
- Ambarella N1-655 — C2025S ~100x AI ✓
- Ambarella N1 — 2022S ~600x AI ✓

CV3-AD family of central domain controllers

4nm Samsung:
- Ambarella CV7 — 2026S ~32x AI ✓ — New
- Ambarella X7 — 2026S ~32x AI ✓ — New

2nm Samsung:
- Ambarella CV8 — New

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

ASP range $10 to $75

10nm Samsung:
- Ambarella CV28 — Feb 2021P, 1x AI Baseline
- Ambarella CV25 — Jul 2019P, 2x AI
- Ambarella CV22 — Dec 2018P, 4x AI
- Ambarella CV22FS — Apr 2021P, 4x AI
- Ambarella CV2 — Aug 2019P, 16x AI
- Ambarella CV2FS — Apr 2021P, 8x AI

5nm Samsung:
- Ambarella CV5/52 — 2022P, 12x AI ✓

Video Processors
(e.g., Human Viewing)

ASP range single digits

Ambarella H22, Ambarella S5L, Ambarella H12, Ambarella S3L, Ambarella A12, Ambarella S2L

"New Products" ✓
20xx = Calendar Year
P = Production
S = Sample

More than **50 Million** AI SoCs Shipped Cumulatively

Highly Programmable Edge AI Platform

Our SoCs + SW offer customers a high degree of flexibility across a variety of AI workloads

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Market

- Security
- Portable Video
- Auto
- Robotics
- Drones
- Telematics
- Edge Infra
- ....

Application Software

- Customer #1 SW
- Customer #2 SW
- Customer #3 SW
- L2+ to L4 SW
- Customer #4 SW
- Customer #5 SW
- Customer #n SW
- ....

- AI ISP
- AI Libraries
- Opensource AI Toolchain

Platform Software

- Cooper Developer™ Platform
- Cooper SDK

Systems

- Edge Endpoints
- Edge Infrastructure

Silicon

- Video Processors
- 2nd Gen Edge AI SoCs
- 3rd Gen Edge AI SoCs

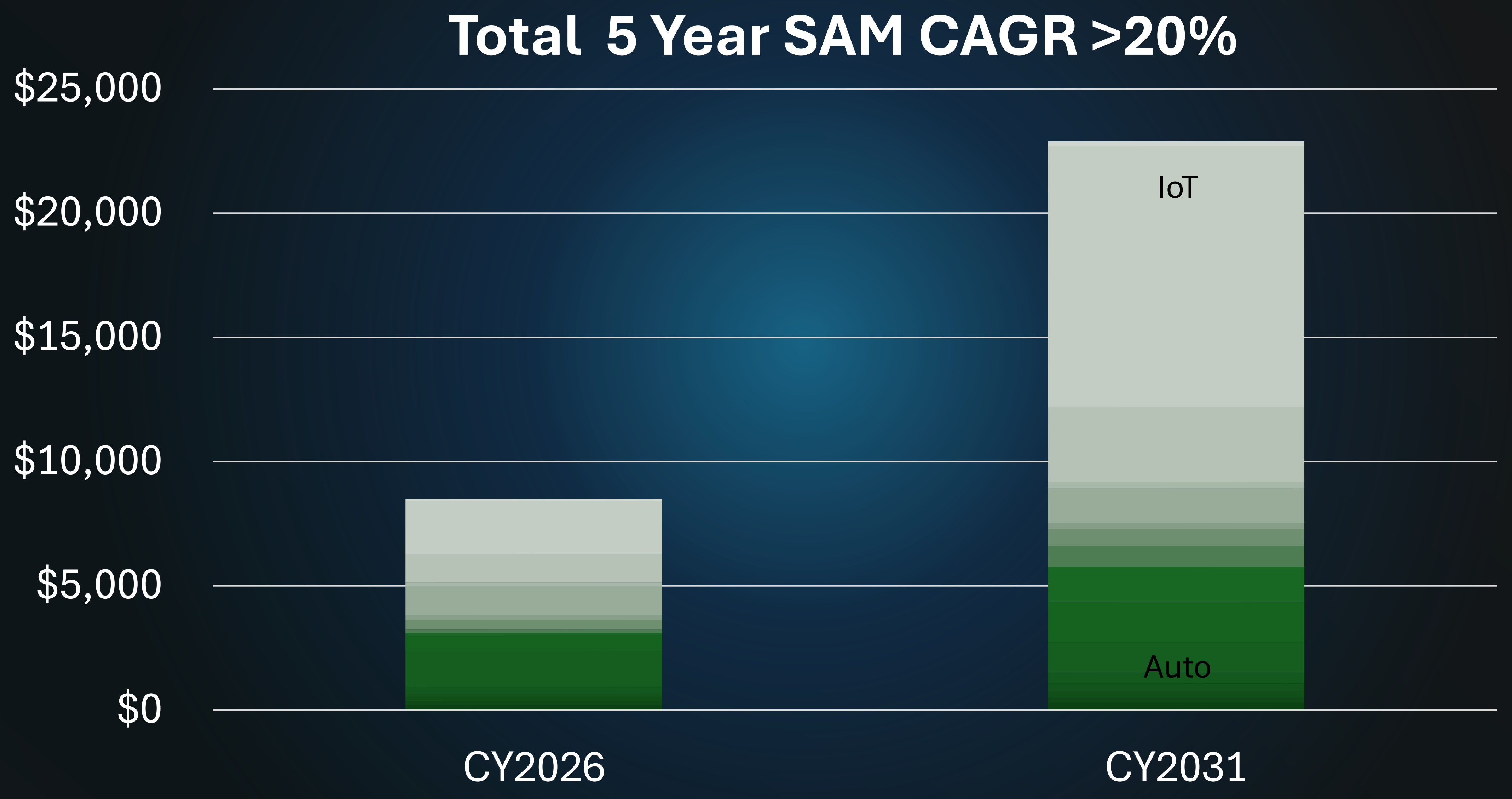
Ambarella developed

Customer developed

Scalable platform with minimal incremental investment to address new markets

Ambarella's Market Sizing (SAM)

Updated 5 year rolling serviceable available market ("SAM") forecast (September 2026)



Rapid Expansion in Edge AI Use Cases

Design Win & Production Scheduled

IoT Applications ~78% F2026 Revenue

Sub-segments: Edge Endpoints and Edge Infrastructure


ENTERPRISE SECURITY


HOME SECURITY


PORTABLE VIDEO


OTHER


ROBOTICS


DEVELOPER AI WORKSTATIONS


AI VISION BOX


ON-PREMISE AI SERVERS

CV2 / CV5 / CV7

N Family

Edge Endpoint

Edge Infrastructure

- Our IoT SAM is now dominated by AI and our estimated IoT SAM is $5.3 billion in F2027 and an estimated $16.3 billion in F2032. IoT endpoints currently represent a vast majority of our revenue
- Expanding breadth of AI applications. Edge AI originated in enterprise security markets, then public and smart home applications, automotive safety and telematics, and has now expanded to multiple portable video applications, with multiple robotic, edge infrastructure and other “green shoot applications” on the horizon
- The 3rd generation AI accelerator embedded in our new SoCs enables advanced AI reasoning and vision AI applications supporting leading GenAI models ranging from hundreds of million to 34 billion parameters
- Our scalable technology enables us to now extend our reach into the edge infrastructure market

Auto Applications ~22% of F2026 Revenue

Sub segments: Safety/Telematics/ADAS (L0, L1 and L2) and Autonomy (L2+ to L4)

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DRIVE RECORDER

E-MIRROR SURROUND

IN-CABIN (DMS/OMS)

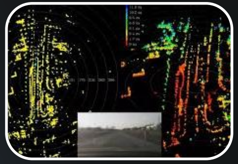
FORWARD ADAS

L2+/L3 CENTRAL DOMAIN CONTROLLER

L4/L5

L2+/L3 SW

L4/L5 SW



4D Radar SW

Safety/Telematics/ADAS — CV2/CV5/CV7 Series

Autonomy — CV3 Series

- Our auto SAM is now dominated by AI and our Auto SAM is an estimated $3.2 billion in F2027 and an estimated $6.6 billion in F2032. Auto Safety/Telematics currently represents a majority of our automotive revenue

- Many Auto Safety/Telematics applications now utilize AI inferencing technology, increasing the utility of drive recorders, e-mirrors, surround view, driver and occupant monitoring and forward ADAS. *We define ADAS as L0, L1 or L2.* A combination of increasing market penetration and/or share gains are expected to be key factors in our anticipated Safety/Telematics growth

- In Auto Autonomy our CV3-AD platform includes AI central domain controllers, L2+ to L4 SW stack IP and 4D Radar SW. *We define auto autonomy as L2+ to L4.* Our platform is differentiated by our superior power efficiency, open platform, high performance (ability to support end-to-end AI and Birds-Eye View transformer for early fusion) and our scalable CV3-AD SoC family

TOYOTA NISSAN Continental Panasonic RIVIAN GENTEX CORPORATION samsara

Q3 (October 2026) F2027 Outlook and Q2 (July) F2027 Recap

Data from Q2 F2027 earnings conference call on September 3, 2026

Q3 F2027 (October, 2026) Outlook

- Our Q3 revenue guidance is $115.0M to $124.0M (consensus estimate ~$119.1M on September 1st); at $119.5M midpoint with IoT led growth
- Q3 non-GAAP gross margin estimated to be 59.0% to 60.0% (consensus 59.7%)
- Q3 non-GAAP operating expense $56.5M to $59.5M (consensus $59.1M)
- Announced plans to pass rising supply-chain costs to customers, maintaining long-term 59.0% to 62.0% gross margin range

Q2 F2027 (July, 2026) Results

- Revenue of $108.1M was slightly above the midpoint of our guidance range of $105.0M to $111.0M (consensus estimate ~$107.8M)
- Non-GAAP gross margin was 59.3% versus the consensus estimate of 59.7%
- Non-GAAP operating expense was $57.4M (consensus $57.8M)
- Non-GAAP earnings per share were $0.18 versus the consensus estimate for earnings per share of $0.17

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 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, price increases and/or availability of other components on our customers' bill-of-materials, electricity and manufacturing capacity, the sell-out from our customers own sales channels and adverse weather conditions
    - changes to government policies, for example 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.*

15

Thank you!

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