Himax Technologies, Inc. Q4 and Full Year 2024

Unaudited Financials and Investor Update Call

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Himax Speakers: **Jordan Wu, President & Chief Executive Officer** **Eric Li, Chief IR/PR Officer** **Webcast:** **http://www.zucast.com/webcast/br8wqbB4**	

Operator: Hello, ladies and gentlemen. Welcome to the Himax Technologies Inc. Fourth Quarter and Full Year 2024 Earnings Conference Call. At this time, all participants are in a listen-only mode. Later, we will conduct a question-and-answer session and instructions will follow at that time. As a reminder, this conference call is being recorded. I would now like to turn the conference over to Mr. Eric Li, Chief IR/PR Officer at Himax.

Mr. Eric Li: Welcome everyone to the Himax Fourth Quarter and Full Year 2024 Earnings Call. My name is Eric Li, Chief IR/PR Officer at Himax. Joining me today are Jordan Wu, President and Chief Executive Officer, Jessica Pan, Chief Financial Officer. After the Company's prepared comments, we

have allocated time for questions in a Q&A session. If you have not yet received a copy of today's results release, please email HIMX@mzgroup.us or hx_ir@himax.com.tw, access the press release on financial portals or download a copy from Himax's website at www.himax.com.tw.

Before we begin the formal remarks, I'd like to remind everyone that some of the statements in this conference call, including statements regarding expected future financial results and industry growth, are forward-looking statements that involve a number of risks and uncertainties that could cause actual events or results to differ materially from those described in this conference call. A list of risk factors can be found in the Company's SEC filings, form 20-F for the year ended December 31, 2023 in the section entitled "Risk Factors", as may be amended.

Except for the Company's full year of 2023 financials, which were provided in the Company's 20-F and filed with the SEC on April 2, 2024, the financial information included in this conference call is unaudited and consolidated and prepared in accordance with IFRS accounting. Such financial information is generated internally and has not been subjected to the same review and scrutiny, including internal auditing procedures and external audits by an independent auditor, to which we subject our annual consolidated financial statements, and may vary materially from the audited consolidated financial information for the same period. The Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Q4 2024 Results

On today's call, I will first review the Himax consolidated financial performance for the fourth quarter and full year 2024, followed by our first quarter 2025 outlook. Jordan will then give an update on the status of our business, after which we will take questions. You can submit your questions online through the webcast or by phone. We will review our financials on an IFRS basis.

We are delighted to announce that the Q4 revenues, gross margin as well as profits all surpassed the guidance issued on November 7, 2024, despite prevailing economic challenges. The better-than-expected financial results were primarily driven by stronger order momentum across product lines, along with cost improvements and a better product mix.

Fourth quarter revenues registered $237.2 million, an increase of 6.7% sequentially, significantly exceeding our guidance range of a slight decrease to flat, and up 4.2% year-over-year. Gross margin reached 30.5%, exceeding our guidance of flat to slightly up from 30.0% in the previous quarter, and up from 30.3% in the same period last year. The sequential increase was driven by a favorable product mix and cost improvements. Q4 profit per diluted ADS was 14.0 cents, considerably above the guidance range of 9.3 cents to 11.0 cents, thanks to better-than-expected revenues and improved costs.

Revenue from large display drivers came in at $25.0 million, reflecting a 18.6% sequential decline. The decrease was primarily attributed to continued customer destocking after substantial Q2 replenishment for shopping festivals, as well as heightened price competition from Chinese peers. Sales of large panel driver ICs accounted for 10.5% of total revenues for the quarter, compared to 13.8% last quarter and 14.8% a year ago.

Revenue from the small and medium-sized display driver segment totaled $166.8 million, an increase of 7.4% sequentially, exceeding our guidance of flat quarter-over-quarter, thanks to stronger-than-expected sales in the automotive and tablet markets. Q4 automotive driver sales, including both traditional DDIC and TDDI, experienced mid-teens increase, significantly outperforming our expectation of a single digit increase, with both DDIC and TDDI showing stronger-than-expected sales. This surge was primarily driven by continued rush orders from Chinese panel customers, carried over from Q3, following the Chinese government's renewed trade-in stimulus initiative announced in mid-

August 2024 to boost automobile consumption. Remarkably, our Q4 automotive TDDI sales have exceeded DDIC sales for the first time, underscoring the global adoption of our TDDI solutions, which are increasingly essential in modern vehicles, and reflects the growing demand for more intuitive, interactive, and cost-effective touch panel features powered by TDDI technology. Our automotive business, comprising drivers, Tcon, and OLED IC sales, accounted for around 50% of total Q4 revenues. Meanwhile, Q4 tablet IC sales exceeded the guidance of a low teens decline, with sales up slightly sequentially driven by rush orders from leading end customers. Q4 smartphone IC sales declined slightly, in line with our guidance. The small and medium-sized driver IC segment accounted for 70.3% of total sales for the quarter, compared to 69.9% in the previous quarter and 71.6% a year ago.

Q4 non-driver sales reached $45.4 million, exceeding the guidance range, with a 24.9% increase from the previous quarter. The growth was primarily driven by a one-time ASIC Tcon product shipment to a leading projector customer and Tcon for monitor application. In Q4, automotive Tcon sales continued to grow sequentially, due to the widespread adoption of our market-leading local dimming Tcon with over two hundred secured design-win projects across major panel makers, Tier 1 suppliers, and automotive manufacturers worldwide. Non-driver products accounted for 19.2% of total revenues, as compared to 16.3% in the previous quarter and 13.6% a year ago.

Fourth quarter operating expenses were $49.2 million, a decrease of 19.1% from the previous quarter and a decline of 6.0% from a year ago. The sequential decrease stemmed primarily from a reduction in annual employee bonuses, partially offset by an increase in R&D expenses. As part of our standard company practice, we grant annual bonuses, including cash and RSUs, to employees at the end of September each year. This results in higher IFRS operating expenses in the third quarter compared to the other quarters of the year. The year-over-year decrease was mainly due to a decline in employee bonus compensation as the amortized portion of prior year’s bonuses for 2023 was higher

than that for 2024, offsetting the higher annual bonus compensation grant for 2024 compared to 2023. Amid ongoing macroeconomic challenges, we are strictly enforcing budget and expense controls, with full-year 2024 operating expenses declining 5.6% compared to last year.

Fourth quarter operating income was $23.1 million or 9.7% of sales, compared to 2.6% of sales last quarter and 7.3% of sales for the same period last year. The sequential increase was primarily the result of higher sales, improved gross margin, and lower operating expenses. The year-over-year increase was primarily the result of higher sales, higher gross margin, and lower employee bonus compensation due to the amortized portion of the prior year's bonuses. Fourth-quarter after-tax profit was $24.6 million, or 14.0 cents per diluted ADS, reflecting a meaningful increase from $13.0 million, or 7.4 cents per diluted ADS last quarter, and up from $23.6 million, or 13.5 cents in the same period last year.

2024 Full Year Summary

Now, let's quickly review the financial performance for the full year 2024. Revenues totaled $906.8 million, a slight decline of 4.1% compared to 2023. Persistent global demand weakness, coupled with uncertainty about market trends, led to conservative purchasing decisions and inventory management by our panel customers. Given this uncertainty, we implemented strict expense controls, resulting in a 5.6% reduction in operating expenses for the year. However, our optimism in the automotive business remains unwavering, with automotive IC sales increasing by nearly 20% year-over-year in 2024, far outpacing the overall automotive market growth. Among our automotive product lines, automotive TDDI and Tcon sales, both relatively new technologies, surged by more than 70%, driven by accelerated adoption across the board. This growth strengthened our market leadership and positions us well for continued success as the automotive sector embraces more advanced technology resulting from the mega trend of increasing size, quantity, and sophistication of displays inside vehicles.

Revenue from large panel display drivers totaled $125.9 million in 2024, marking a decrease of 28.3% year-over-year, and representing 13.9% of total sales, as compared to 18.6% in 2023. Small and medium-sized driver sales totaled $625.4 million, reflecting a slight decrease of 0.6% year-over-year, and accounting for 69.0% of our total revenues, as compared to 66.5% in 2023. Non-driver product sales totaled $155.5 million, an increase of 10.6% year-over-year, and representing 17.1% of our total sales, as compared to 14.9% a year ago.

Gross margin in 2024 was 30.5%, up from 27.9% in 2023. The margin expansion was driven by a strategic focus on cost improvements and operational efficiency optimization, combined with a favorable product mix that included a higher percentage of high-margin products such as automotive and Tcon. The successful diversification of foundry sources also contributed to the margin increase.

Operating expenses in 2024 were $208.0 million, a decline of 5.6% from 2023, primarily due to lower employee bonus compensation, as the amortized portion of bonuses in 2023 was higher than that in 2024. 2024 operating income was $68.2 million, or 7.5% of sales, an increase from $43.2 million, or 4.6% of sales, in 2023. Our net profit for 2024 was $79.8 million, or $0.46 per diluted ADS, significantly up from $50.6 million, or $0.29 per diluted ADS in 2023.

Turning to the balance sheet, we had $224.6 million of cash, cash equivalents and other financial assets as of December 31, 2024. This compares to $206.4 million at the same time last year and $206.5 million a quarter ago. We achieved a strong positive operating cash flow of $35.4 million for the fourth quarter, compared to a cash outflow of $3.1 million in Q3. We made a total of $30.1 million annual cash bonus to employees, resulting in the low operating cash flow of the quarter. As of December 31, 2024, we had $34.5 million in long-term unsecured loans, with $6.0 million representing the current portion.

Our year-end inventories were $158.7 million, lower than $192.5 million last quarter and $217.3 million at the end of last year. Our inventory levels have steadily declined over the past couple of quarters and are now at a healthy level. Accounts receivable at the end of December 2024 was $236.8 million, little changed from $224.6 million last quarter and $235.8 million a year ago. DSO was 96 days at the quarter end, as compared to 92 days last quarter and 91 days a year ago. Fourth quarter capital expenditures were $3.2 million, versus $2.6 million last quarter and $15.1 million a year ago. Fourth quarter capex was mainly for R&D related equipment for our IC design business. Total capital expenditures for 2024 were $13.1 million as compared to $23.4 million in 2023. The decrease was primarily due to reduced spending on in-house testers for our IC design business in 2024.

As of December 31, 2024, Himax had 174.9 million ADS outstanding, little changed from last quarter. On a fully diluted basis, the total number of ADS outstanding for the fourth quarter was 175.1 million.

Q1 2025 Guidance

Now, turning to our first quarter 2025 guidance. We expect first quarter 2025 revenues to decrease by 8.5% to 12.5% sequentially, reflecting the low season demand due to Lunar New Year holidays. The revenue guidance implies a year-over-year performance ranging from flat to a 4.6% increase. Gross margin is expected to be around 30.5%, depending on product mix. This compares to 29.3% of same period last year. The first quarter profit attributable to shareholders is estimated to be in the range of 9.0 to 11.0 cents per fully diluted ADS, implying a year-over-year increase of 26% to 54%.

We have noticed that some peers' customers placed orders early due to tariff factors, especially in the consumer electronics sector, resulting in Q1 revenue forecasts exceeding normal seasonal demand. In contrast, no similar trend has been observed in the automotive semiconductor market. Since Himax’s automotive business accounts for more than half of our total revenues, our Q1 revenue forecast has not benefited from tariff factors.

I will now turn the call over to Jordan to discuss our Q1 2025 outlook. Jordan, the floor is yours.

Q1 2025 Outlook

Thank you, Eric. In 2024, our sales revenues in each quarter consistently outperformed guidance. While this strong performance is certainly commendable, it also highlights the challenges we faced such as limited market visibility and conservative customer demand, where many customers relied on rush orders to address their actual demands. On the other hand, rush orders are indicative of the tight inventory position of our panel customers in general. In the past few quarters, we have consistently demonstrated our ability to handle most of such rush orders, underscoring our agility, adaptability, strong capabilities in inventory management, and swift market responsiveness.

The automotive IC sales remained our largest revenue contributor in 2024, accounting for almost half of total revenues and achieving close to 20% annual growth. This performance highlights Himax's automotive leadership in technological innovations, product development, and market share. Looking ahead, we expect our automotive TDDI and Tcon technologies to maintain growth momentum, further strengthening our market competitiveness. Beyond LCD technology, Himax is advancing development in the automotive OLED sector, with numerous projects currently underway in partnership with leading panel makers. We anticipate that automotive OLED IC will serve as one of the key growth drivers for Himax in the coming years, further solidifying our leadership in automotive display market.

Meanwhile, Himax is actively expanding its technology development beyond display ICs. To that end, in the WiseEye AI segment, we have made notable progress with leading notebook brands and achieved significant breakthroughs in smart door lock, palm vein authentication, and smart home

applications, collaborating with world-leading customers to develop new innovations. We anticipate a strong growth trajectory in our WiseEye business in 2025 and beyond.

Himax's proprietary wafer-level optics (WLO) technology for co-packaged optics (CPO) has recently garnered significant attention in the capital markets. In fact, as early as June 2024, Himax and FOCI, a global leader in silicon photonics connectors, jointly announced the industry-leading CPO technology. The collaboration, spanning several years, unites Himax's WLO technology with FOCI's CPO solutions for cutting-edge AI multi-chip modules (MCM). Since the announcement, we have provided updates on the latest progress in each quarterly earnings call. Himax's WLO technology plays a critical role in CPO by providing essential optical coupling capability, making it a core element of the solution. CPO significantly enhances bandwidth and accelerates data transmission while reducing signal loss, latency, and power consumption. Additionally, it can help drastically decrease the size and cost of MCM.

While CPO is still in engineering validation and trial production stage this year, with customer's mass production timelines undisclosed and the recent AI market disruptions from DeepSeek, the prospect of CPO remains unchanged. The widespread adoption of CPO for data transmission to be conducted via optics instead of metal wire is on track in high-performance AI applications. This is evident by the significant increase in customer's recent trial production volume forecast, indicating an accelerated timeline for CPO technology to enter mass production. Furthermore, Himax and FOCI, in close collaboration with leading AI customers and partners, are actively developing future generations of CPO technologies to meet the explosive high-speed optical data transmission demand in HPC and AI. Through WLO and CPO technologies, Himax is well-positioned to engage in the high-speed AI computing market with high expectations for its growth. We believe that CPO technology, beyond cloud applications, will see further adoption in sectors such as automotive and robot in the future. Our

current goal is to accelerate CPO adoption in cloud applications, thereby helping drive broader CPO adoption in AI applications.

At CES this year, Himax showcased a wide range of innovative achievements, including automotive display technology, WiseEye AI, and advanced optical technologies for AR/VR. Notably, a clear trend emerged at this year's CES as the industry demonstrated growing enthusiasm for AR glasses, fueled by more companies entering the space and integrating generative AI to accelerate the development of lightweight, compact, and all-day AR glasses. For AR glasses, Himax offers three critical technologies, namely LCoS microdisplay, WLO waveguide, and ultralow power WiseEye AI. Our latest, patented Front-lit LCoS Microdisplay delivers unparalleled brightness with an industry-leading 400k nits, exceptional optical power efficiency, compact form factor, lightweight, and superior display quality, making it one of the most viable solutions in the see-through AR glasses market. In waveguide, in collaboration with leading tech names, Himax leverages proprietary WLO expertise, built on advanced nanoimprint technology, to offer industry-leading optical solutions that optimize light transmission and display efficiency. In the field of AI sensing for AR glasses, Himax's WiseEye provides always-on AI sensing capabilities which are being applied by developers to significantly enhance AR interactivity while consuming just a few milliwatts of power.

In automotive display IC technology, we unveiled the industry's most comprehensive LCD and OLED solutions at CES, showcasing a range of next-generation smart cabin technologies. These solutions not only improve the intuitive operation of smart cabins but also enhance driving safety and provide an exceptional user experience. A prime example is the advanced Display HMI solution developed in collaboration with AUO which meets the demands for large-size, high-resolution, and freeform automotive displays.

At CES, Himax also partnered with several AI ecosystem partners to showcase its ultralow power WiseEye Modules over a range of innovative, production-ready AIoT applications. These applications include palm vein authentication, baby cry detection, people flow management, and human sensing detection. The modules are designed for easy integration, making it highly suitable for various AIoT applications.

Display Driver

LDDIC Businesses

With that, I'll now begin with an update on the large panel driver IC business. In Q1, we anticipate a single digit sequential sales increase for large display driver ICs, driven by demand spurred by Chinese government subsidies for household appliances aimed at reviving demand in the sluggish household sector. Notebook and monitor sales are expected to increase in Q1. In contrast, TV IC sales are set to decline as customers pulled forward their inventory purchases in the prior quarter, coupled with the seasonal slowdown in Q1.

Looking ahead in the notebook sector, we are seeing an increase in demand for premium notebooks to adopt OLED displays and touch features, partially fueled by the rise of AI PC. Himax is well-positioned to capitalize on this trend, offering a comprehensive range of ICs for both LCD and OLED notebooks, including DDIC, Tcon, touch controllers, and TDDI. A standout innovation is our pioneering in-cell touch TDDI for LCD displays, which improves the ease of system design and integration by embedding the touch controller within the TDDI chip while maintaining the conventional display driver setup for Tcon data transmission. This design simplifies integration for customers, reducing engineering complexity and speeding up product development. This solution also supports high-resolution displays up to 4K and larger screens up to 16 inches, aligning with the growing demand for advanced, visually stunning, and immersive laptops. With mass production already underway for a leading notebook vendor's AI PC, more projects are lined up. For OLED notebooks, in addition to our

OLED DDIC and Tcon solutions, we are also developing on-cell touch controller technology, with multiple projects underway with top panel makers and notebook vendors. Last but not least, progress has been made on the next-generation eDP 1.5 display interface for Tcon for both LCD and OLED panels. This interface will support high frame rates, low power consumption, adaptive sync, and high resolution, key features essential for next-generation AI PCs. By delivering innovative, cutting-edge technologies, Himax is well-positioned to lead in the rapidly evolving landscape of AI PCs and premium notebooks.

SMDDIC

Turning to the small and medium-sized display driver IC business. For the full year 2024, our automotive driver IC sales, comprising of TDDI and traditional DDIC, increased nearly 20% year-over-year, significantly outpacing global automotive growth, largely driven by the continued adoption of TDDI technology among major customers across all continents. However, we anticipate Q1 automotive revenue to decline low teens sequentially, following two quarters of surge demand. Despite this, Q1 automotive sales are still projected to increase by mid-teens on a year-over-year basis. In the automotive TDDI sector, with cumulative shipments significantly surpassing those of our competitors, we continue to reinforce our market leadership, which currently stands at well over 50%. With nearly 500 design-in projects secured and a continuous influx of new pipeline and design-wins across the board, of which only 30% already in mass production, we expect to sustain this decent growth in the years ahead. While traditional automotive DDIC sales for 2024 declined due to their gradual, partial replacement by TDDI, our DDIC shipment volume still saw a modest increase in the last year. This demonstrates the steady demand for mature DDIC products, such as those used in cluster displays, HUDs, and rear- and side-view mirrors, which do not require touch functionality. Furthermore, the long-term trust and loyalty from our DDIC customers, some of whom have relied on our solutions for over a decade, is indicative of our strong customer retention. We continue to lead the automotive DDIC market, maintaining a global market share of approximately 40%.

Himax continues to lead in automotive display IC innovation by pioneering solutions that deliver superior performance, power efficiency, and enhanced user experiences. As part of this ongoing innovation, our latest TED (Tcon Embedded Driver IC) solution, which combines TDDI with local dimming Tcon into a single chip, provides a cost-effective, flexible, and comprehensive solution for our customers. Another new technology worth highlighting is our automotive TDDI with advanced user-aware touch control, which differentiates between driver and passenger touches to prevent cross-touch and enhance driving safety. In addition, we offer a unique knob-on-in-cell-display solution that combines a physical knob with a TDDI. This design seamlessly merges in-cell touch technology with tactile controls, offering drivers a safer, more intuitive interaction that reduces distractions and enhances the overall driving experience.

Moving to smartphone and tablet IC sales, we expect a sequential decline in both product lines, as is typical during the low season in Q1 due to the Lunar New Year.

Next for an update on our OLED business. In the automotive OLED market, we have established strategic partnerships with leading panel makers in Korea, China, and Japan. As OLED technology extends beyond premium car models, Himax is well-positioned as the preferred partner, leveraging our strong presence and proven track record in the automotive LCD display sector. Capitalizing on our first-mover advantage, we aim to drive the growing adoption of OLED in automotive displays by offering a comprehensive range of solutions, including DDIC, Tcon, and on-cell touch controller. We believe this positions us as a primary beneficiary of the anticipated shift toward OLED displays for high end vehicles in a couple of years, enabling us to capture new growth opportunities and further strengthen our market leadership.

Beyond the automotive sector, we have also made strides in the tablet and notebook markets, partnering with leading OLED panel makers in Korea and China. Our comprehensive OLED product

portfolio, covering DDIC, Tcon, and touch controllers, has driven several new projects that are on track to begin mass production this year. In the smartphone OLED market, we are making solid progress in our collaborations with customers in Korea and China and we anticipate mass production to start later this year.

First quarter small and medium-sized display driver IC business is expected to decline low teens sequentially.

Non-Driver Product Categories

I'd like to now turn to our non-driver IC business update where we expect the first quarter revenue to decrease high teens sequentially.

Timing Controller (Tcon)

First for an update on our Tcon business. We anticipate Q1 Tcon sales to decrease mid-teens sequentially, primarily due to the non-recurrence of a one-time ASIC Tcon shipment to a leading projector customer last quarter, as well as a moderation in automotive Tcon shipments following several quarters of strong growth. That being said, Himax maintains an unchallenged position in local dimming Tcon, evidenced by growing validation and widespread adoption in both premium and mainstream car models worldwide. We are confident in the continued growth of our automotive Tcon business, supported by our strong market presence in local dimming Tcon, with strong pipeline of over two hundred design-win projects set to gradually enter production in the coming years. Heads-up display (HUD) is another field gaining traction within automotive displays, driving increased adoption of local dimming Tcon technology and emerging as a particularly promising application. Our industry-leading local dimming Tcon provides distinct advancements with high contrast ratio and optimized power consumption. It effectively eliminates the "postcard effect" often seen in HUDs,

caused by backlight leakage typical of conventional TFT LCD panels, ensuring clear and precise images on the windshield. Additionally, the Tcon features advanced transparency detection to prevent the display from obstructing the driver's view, thereby ensuring driving safety. Several HUD projects are already in progress, and we are excited about the potential opportunities ahead. We are well positioned for continuous growth in automotive Tcon over the next few years.

WiseEye™ Ultralow Power AI Sensing

Switching gears to the WiseEye™ ultralow power AI sensing solution, a cutting-edge endpoint AI integration featuring industry-leading ultralow power AI processor, always-on CMOS image sensor, and CNN-based AI algorithm. WiseEye AI delivers a significant competitive edge in the rapidly growing AI market through its ultralow power consumption and context-aware, on-device AI inferencing that seamlessly integrates vision and other sensing capabilities into endpoint applications, particularly battery-powered devices. This not only enhances intuitive user interaction but also makes AI more practical and accessible. Additionally, WiseEye AI offloads tasks from the main processor, effectively extending battery lifespan and improving overall data processing efficiency. Building on the success with Dell notebooks, Himax WiseEye AI is continuing to expand its market presence, with additional use cases expected across other leading notebook brands, some of which are set for production later this year.

WiseEye also continues to achieve significant market success across various sectors. For smart door lock, we collaborated with DESMAN, a leading high-end brand in China, to introduce the world's first smart door lock with 24/7 sentry monitoring and real-time event recording. Building on this achievement, we are expanding globally by collaborating with other leading door lock makers worldwide to integrate innovative AI features, including parcel recognition, anti-pinch protection, and palm vein biometric access, further extending application possibilities. Several of these value-added

solutions are set to enter production later this year. At CES 2025, Himax joined forces with ecosystem partners to unveil a suite of innovative, production-ready AIoT applications, powered by our tiny form factor, plug-and-play WiseEye Modules. Himax offers a series of modules, each incorporating an ultralow power WiseEye AI processor, an AoS image sensor, and advanced algorithms. The modules feature no-code/low-code AI platform capabilities, simplifying AI integration and supporting diverse use cases, such as human presence detection, gender and age recognition, gesture recognition, face mesh, voice command, thermal image sensing, pose estimation and people flow management. By streamlining deployment and reducing development costs, WiseEye Modules open new opportunities for automation, enhance interactivity, and elevate user experiences across a variety of industries.

A broad range of innovative, ultralow power WiseEye Modules are also under development in collaboration with ecosystem partners, such as crying baby detection, dynamic gesture recognition, and human sensing, among others. One standout in our WiseEye Module portfolio is the Himax WiseEye PalmVein solution, which has quickly gained traction since its introduction just one year ago. We have secured multiple design wins, with mass production already underway by a US customer for smart access applications and a Taiwan-based door lock vender for its leading smart door lock brands. To meet growing customer demand for flexibility across various environments, the upgraded WiseEye PalmVein suite now features bimodal authentication, combining both palm vein and face recognitions. This dual-authentication solution enhances security by offering two layers of biometric verification, which not only increases reliability but also makes it highly adaptable to various environments.

The rise of physical AI agents marks a significant shift in human-machine interaction, enabling devices to perceive, process, and respond to their surroundings in real time. A key emerging trend is the integration of cloud-based large language models (LLMs), which enables these agents' advanced reasoning and language understanding, enhancing their ability to interact with and adapt to the physical world. Himax WiseEye AI is at the forefront of this revolution, delivering always-on sensor

fusion, ultralow power on-device processing, while seamlessly interfacing with LLMs, to provide the essential real-time AI capabilities for next-generation applications. A good illustration of this innovation was showcased at CES 2025, where Himax and Seeed Studio introduced the SenseCAP Watcher, a physical AI agent powered by WiseEye AI. Equipped with vision and audio sensor fusion, along with a speaker, this battery-powered IoT device combines on-device AI with cloud-based LLMs to interpret commands, recognize objects, respond to events, and facilitate real-time interaction. Drawing from the success of SenseCAP Watcher, we are actively working on multiple projects leveraging WiseEye AI to further drive advancements in physical AI agent applications.

Separately, we are excited about our collaboration with a leading AR player to integrate WiseEye AI into the next generation of AR glasses. As I mentioned earlier, at CES, there was a renewed enthusiasm on AR glasses with AI becoming an integral component to enable intuitive and seamless human-device interaction. WiseEye AI addresses two critical challenges in AR glasses, namely real-time responsiveness and power efficiency. For example, WiseEye supports always-on outward sensing, enabling AR glasses to detect and analyze the surrounding environment with real time context-aware AI. This capability powers instant response, real-time object recognition, navigation assistance, translation, and environmental mapping, enhancing the overall AR experience. Notably, WiseEye AI's exceptional ultralow power consumption, measured in single digit milliwatts, also make it perfectly suited for AR glasses for all-day wear. In another example, we collaborate with Ganzin on eyeball tracking technology, which, powered by WiseEye, precisely detects subtle eyeball movements, gaze direction, pupil size, and blinking, thereby providing critical data for the enhancement of user interaction in AR glasses.

Wafer Level Optics (WLO)

In June 2024, Himax, in partnership with FOCI, a world leader in silicon photonics connector, unveiled an industry-leading co-packaged optics (CPO) technology, leveraging Himax state-of-the-art WLO technology. This innovation integrates silicon photonic chips and optical connectors within MCM, replacing traditional metal wire transmission with high-speed optical communication. The technology significantly enhances bandwidth, boosts data transmission rates, reduces signal loss and latency, lowers power consumption, and significantly minimizes the size and cost of MCM. In working closely with FOCI, we are making significant strides through a solid partnership with leading AI semiconductor companies and foundry, with small-scale production of the first-generation CPO solution already underway. As mentioned earlier, the significant increase in Q1 engineering validation and trial production volume, combined with the anticipated sample volume increases in the coming quarters, is a strong indication that CPO technology is being accelerated toward mass production. In addition, in close collaboration with leading AI customers/partners, we are speeding up the development of CPO technology for the next few generations. We are more optimistic than ever about the outlook for our WLO business, which is poised to generate significant growth opportunities and become a major revenue and profit contributor in the years ahead.

Alongside the CPO progress, we are witnessing a rise in engineering collaborations with global technology leaders who are utilizing our WLO expertise to make advanced waveguides for AR glasses, highlighting the growing recognition of our WLO capabilities.

LCoS

For an update on LCoS, we recently introduced our industry-leading 400K nits ultra-luminous Front-lit LCoS Microdisplay, setting a new benchmark for brightness with extremely low power consumption of merely 300mW. At CES 2025, we showcased an AR glasses POC (Proof-Of-Concept) featuring the microdisplay with a third-party waveguide, achieving over 1,000 nits of brightness to the eye. This demonstration highlighted its suitability for outdoor, high ambient light conditions. With a lightweight of just 0.98 grams and ultra-compact form factor of less than 0.5 c.c., combined with excellent color performance, Himax's Front-lit LCoS Microdisplay is ideal for all-day AR glasses and underscores the technology's readiness for real-world applications.

Following the recent release of our 400K nits ultra-luminous Front-lit LCoS Microdisplay, we are actively engaged in significant projects through strategic collaborations with industry leaders. Himax's proven track record of over a decade in LCoS technology, coupled with a history of successful production shipments, highlights our readiness to meet the demands of large-scale production of AR glasses.

That concludes my report for this quarter. Thank you for your interest in Himax. We appreciate you joining today's call and are now ready to take questions.

OPERATOR TO QUEUE QUESTIONS

Jordan's closing remarks

As a final note, Eric Li, our Chief IR/PR Officer, will maintain investor marketing activities and continue to attend investor conferences. We will announce the details as they come about. Thank you and have a nice day!