



## Himax Technologies, Inc. Q1 2019 Unaudited Financials and Investor Update Call

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**Operator:** Opening and standard introduction.

**John Mattio:** Thank you, operator. Welcome everyone to Himax's first quarter 2019 earnings call. Joining us from the company are Mr. Jordan Wu, President and Chief Executive Officer, and Ms. Jackie Chang, 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 [jmattio@lamniaintl.com](mailto:jmattio@lamniaintl.com)

or access the press release on financial portals or download a copy from Himax's website at [www.himax.com.tw](http://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. Factors that could cause actual events or results to differ materially from those described in this conference call include, but are not limited to, general business and economic conditions, the state of the semiconductor industry; market acceptance and competitiveness of the driver and non-driver products developed by Himax; demand for end-use application products; the uncertainty of continued success in technological innovations; as well as other operational and market challenges and other risks described from time to time in the Company's SEC filings, including those risks identified in the section entitled "Risk Factors" in its Form 20-F for the year ended December 31, 2018 filed with SEC in March, 2019.

Except for the Company's full year of 2018 financials, which were provided in the Company's 20-F and filed with the SEC on March 28, 2019, 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.

I will now turn the call over to Ms. Jackie Chang – the floor is yours.

### **Q1 Results**

**Ms. Jackie Chang:** Thank you John and thank you everybody for joining us. Our outline for today's call is first to review the Himax consolidated financial performance for the first quarter, followed by the second quarter 2019 outlook. Jordan will then give an update on the status of our business, after which we will take questions. We will review our financials on both IFRS and non-IFRS basis. The non-IFRS financials exclude share-based compensation and acquisition-related charges.

Our first quarter 2019 revenues, gross margin and EPS all met our guidance issued on February 19<sup>th</sup>. For the first quarter, we recorded net revenues of \$163.3 million, a decrease of 14.5% sequentially and an increase of 0.3% year-over-year. The first quarter is traditionally the bottom of the year in terms of sales because it has fewer working days due to the Lunar New Year holidays. Customers' inventory correction on smartphone and the worldwide sluggish automotive sales also negatively impacted our first quarter revenues. Gross margin was 22.6%, down 170 basis points sequentially due to less favorable product mix. IFRS loss per diluted ADS were 1.3 cents, in line with the guidance range of 1.0 to 3.0 cents. Non-IFRS loss per diluted ADS were 1.1 cents, in line with the guidance range of 0.8 to 2.8 cents.

Revenue from large display drivers was \$70.0 million, down 5.7% sequentially, and up 18.0% year-over-year. The sequential decline reflected the impact of seasonality while the year-over-year increase was driven by higher ASP and more 4K TV shipment. Large panel driver ICs accounted for 42.9% of our total revenues for the first quarter, compared to 38.9% in the fourth quarter of 2018 and 36.4% a year ago.

Revenue for small and medium-sized display drivers came in at \$67.6 million, down 15.4% sequentially and down 5.8% year-over-year. The driver ICs for the segment accounted for 41.4% of total sales for the first quarter, as compared to 41.8% in the fourth quarter of 2018 and 44.0% a year ago. Revenue for this segment in the first quarter declined by mid-teens as anticipated due to seasonality, declining cars sales across all major markets, and most importantly, the lackluster demand of the global smartphone market.

Sales into smartphones were down 25.5% sequentially and down 4.1% year-over-year. The sequential decline was mainly caused by lower TDDI shipment and ASP reflecting weak smartphone market and a major TDDI customer's inventory correction. The year-over-year decline was due to the much-decreased shipment in traditional driver IC for smartphone, down close to 50%, as the traditional driver IC is being quickly replaced by TDDI and AMOLED but offset by higher TDDI sales. Display drivers for tablet and other consumer products were down 4.2% sequentially and 27.8% year-over-year due to weak overall market demand.

Our driver IC revenue for automotive applications reached \$28.5 million, down 13.4% sequentially but up 14.5% year-over-year, accounting for 20.7% of our total driver IC revenue. The sequential decline partially reflected seasonality but was largely driven by the weak car sales momentum across all major markets. Another attributing factor is the new European Union emissions regulations effective September last year which has since caused car sales to slump for several major European automakers.

Revenues from our non-driver businesses were \$25.7 million, down 30.2% sequentially and down 19.0% from last year. Non-driver products accounted for 15.7% of total revenues, as compared to 19.3% in the fourth quarter of 2018 and 19.6% a year ago. Lower shipments of timing controllers have attributed to both the sequential and year-over-year decline. The WLO anchor customer's lower seasonal demand also contributed negatively to the sequential decline, but on a year-over-year basis WLO shipment almost doubled.

Our IFRS gross margin for the first quarter was 22.6%, down 170 basis points sequentially and up 10 basis points from the same period last year, both a result of product mix.

Our IFRS operating expenses were \$40.2 million in the first quarter, down 2.0% from the preceding quarter and up 1.0% from a year ago. The slight year-over-year increase was primarily a result of increased depreciation expense, mainly from the new building and equipment needed to support the 3D sensing business. However, salary expense came down from last year due to NT dollar depreciation against US dollar as we pay the bulk

of our employee salaries in NT dollars. Likewise, on a sequential basis, salary and R&D expenses also came down while depreciation charge also went up for the same reason.

IFRS operating margin for the first quarter was -2.1%, little changed from -2.0% in the same period last year but down from 2.8% in the prior quarter. The sequential decrease was primarily a result of lower sales and gross margin, offset by lower operating expenses. The year-over-year decline was a result of higher operating expenses.

First quarter non-IFRS operating loss was \$2.9 million, or -1.8% of sales, versus non-IFRS operating loss of 2.9 million, or -1.8% of sales, for the same period last year and down from 3.0% a quarter ago.

IFRS loss for the first quarter was \$2.3 million, or 1.3 cents per diluted ADS, compared to profit of \$8.5 million, or 4.9 cents per diluted ADS, in the previous quarter and IFRS loss of \$2.8 million, or 1.6 cents per diluted ADS, a year ago. Part of the sequential profit decrease was a result of lower sales and lower gross margin, offset by lower operating expenses. Another factor causing the profit decline is the last quarter's revaluation gain on investment of \$2.9 million, accounting for 1.7 cents per diluted ADS, coming from an AI startup investment made in November 2017 that we reported during the fourth quarter 2018 earnings call. Excluding the investment gain, IFRS profit for Q4 2018 would be \$5.6 million or 3.2 cents per diluted ADS.

First quarter non-IFRS loss was \$2.0 million, or 1.1 cents per diluted ADS, compared to non-IFRS profit of \$8.7 million, or 5.0 cents per diluted ADS last quarter and non-IFRS loss of \$2.6 million, or 1.5 cents per diluted ADS the same period last year. Excluding the

above-mentioned investment gain, non-IFRS profit for Q4 2018 would be \$5.8 million or 3.3 cents per diluted ADS.

Turning to the balance sheet, we had \$108.2 million of cash, cash equivalents and other financial assets as of the end of March 2019, compared to \$151.9 million at the same time last year and \$117.7 million a quarter ago. On top of the cash position, restricted cash was \$164.3 million at the end of the quarter, same to the preceding quarter and up from \$147.0 million a year ago. The restricted cash is mainly used to guarantee the Company's secured short-term borrowing for the same amount. We had \$40 million unsecured short-term loan at the end of Q1. We expect the loan balance to rise further next quarter primarily due to land payment, which will be explained a bit later in the capex discussion.

Our inventories as of March 31, 2019 were \$189.3 million, up from \$162.6 million a quarter ago and up from \$148.0 million at the same time last year. Accounts receivable at the end of March 2019 were \$176.2 million as compared to \$166.6 million a year ago and \$189.3 million last quarter. DSO was 97 days at the end of March 2019, as compared to 92 days a year ago and 95 days at end of the last quarter. As highlighted in the last earnings call, in response to capacity shortage of foundry and certain packaging material, we had to keep the inventory level higher than usual. Looking forward, given the prevailing uncertain market conditions we have started to control our inventory level, targeting to bring it down to a more normal level soon.

Net cash outflow from operating activities for the first quarter was \$22.1 million as compared to an inflow of \$2.3 million for the same period last year and an inflow of \$2.3

million last quarter. Net cash outflow from additional inventory buildup, mainly for driver ICs including TDDI, amounted to \$31.5 million during the quarter. As highlighted above, in response to capacity shortage of foundry and certain packaging material, we had to keep the inventory level higher than usual.

First quarter capital expenditures were \$6.3 million, versus \$18.6 million a year ago and \$5.2 million last quarter. The investment in capex design tools and R&D related equipment for our traditional IC design business amounted to \$2.4 million in the quarter. The remaining \$3.9 million was for the ongoing payments for the new building's construction, WLO capacity expansion and installation of active alignment capacity to support our 3D sensing business. The second quarter capex for our expansion project will reach the peak, budgeted to be \$33 million, including \$27.7 million for the land purchase. By then we will have concluded substantially all the capex payments for the expansion project with just \$3 million left to be made.

As of March 31, 2019, Himax had 172.1 million ADS outstanding, unchanged from last quarter. On a fully diluted basis, the total ADS outstanding are 172.6 million.

**Q2 2019 Guidance:**

For the second quarter, we expect revenue to increase around 2% to 7% sequentially. Gross margin is expected to be around 19.5% to 20.0%, depending on our final product mix. IFRS loss attributable to shareholders are expected to be in the range of around 2.0 to 3.5 cents per diluted ADS based on 172.6 million outstanding ADSs. Non-IFRS loss attributable to shareholders are expected to be in the range of 1.8 to 3.3 cents per diluted ADS based on 172.6 million outstanding ADSs.



I will now turn the call over to Jordan.

**Q2 2019 Outlook:**

**Mr. Jordan Wu:**

Thank you, Jackie.

As Jackie just mentioned in the guidance, we expect the second quarter gross margin to decline around 3% with slightly increasing revenues from the previous quarter. We fully realize that this quarter will mark the second consecutive quarter that we will make a bottom line loss, the first in our corporate history. While we remain committed to our big picture strategy, we are actively taking measures to get back to steady profitability. I will touch on a few of those areas as I go through the outlook discussion below.

The second quarter gross margin will decline for three major reasons. Firstly, the higher material cost of the large panel driver IC resulting from an industry-wide material shortage will lead to lower gross margin. Our large-size panel customers are going through a difficult period of increasing supply and lackluster demand right now. We thought it was prudent not to pass on the rising material cost to our customers as we used to for the consideration of long term relationship. Secondly, the gross margin of the WLO business would also fall because of reduced shipment per an anchor customer's demand which will lead to lower capacity utilization. We do expect the gross margin of WLO to return to a much-improved level in the second half when orders are expected to come back strongly, reflecting the anchor customer's demand seasonality. I will

elaborate on this a bit later in the WLO business discussion. Finally, smartphone segment gross margin would likely shrink a little for product mix change. We anticipate significant sequential increase in the second quarter shipment of TDDI for lower-end market and certain traditional discrete driver IC for smartphones. Both will generate gross margins lower than the corporate average. Again, I will provide more detail later.

Based on our Q1 results and Q2 outlook, our 1H19 revenue would experience year-over-year decline as the current market conditions have not shown signs of improvement. The uncertain market conditions, including global economy, oversupply of TV panel markets, weak global smartphone demand and automotive sales, have led to pricing and cost pressure for us. Customers' ongoing downward inventory adjustment in smartphone TDDI was also outside of our expectation. However, looking ahead into the second half, among our major product segments, we expect TDDI and WLO shipments to increase significantly, offset by shipment decline of the traditional discrete driver ICs for smartphones and automotive display drivers. Automotive display drivers are expected to stay relatively weak following several years' strong and continuous growth. I'll talk more about these product lines later.

Last but not least, we continue to tighten our cost and expense controls. As Jackie mentioned, we are in the process of bringing inventory down from an unusually high level which was built up in response to material shortage. We will begin to see reduction in inventory days and in absolute value in Q2. We are also putting close control in R&D expenses, targeting to continuing R&D activities across our strategic areas without raising R&D expenses from the last year. These include next generation display driver technology for 8K TV and AMOLED, 3D sensing for both mobile phone and non-mobile

phone applications and AI-based ultra-low power smart sensing solutions. Total opex for 2019 is budgeted to be at around the same level as that of the last year excluding the anticipated increase of \$ 4.9 million in depreciation arising primarily from the construction of the new fab. Now let me give you further insights behind our Q2 guidance and trends that we see developing in our businesses.

## **Display Driver IC Business**

### **LDDIC**

As usual, let us start with the large-panel driver IC business update. I just explained the background behind the second quarter margin pressure for our large panel driver IC business, namely a panel market which is in over-supply and COF, the material needed to make large panel driver IC, which is in shortage. Q2 revenue in this segment is expected to decrease by mid-teens sequentially with lower gross margin, as mentioned earlier. While the large display market is still clouded with concerns of oversupply and waning demand, our current forecast for the second half is showing signs of revenue rebound thanks to certain of our product upgrades and earlier design-wins and, most importantly, our efforts to secure additional COF capacity which is leading to more allocation from our panel customers and even more design-wins. The margin for large panel driver will likely still be under pressure during the second half but we are working on ways to improve the costs and margin.

On technology development, I am pleased to report that we have started shipping 8K TV related ICs to one of our industry leading panel customers and expect a few more to come during the second half when more TV brands are scheduled to launch new 8K TV models. Having said that, 8K TVs are still expected to hold a small share in the TV

market because 8K content and transmission technology have not yet matured. But 8K TV is a strategic area for Himax as it will boost demand for higher LCD driver ICs and timing controller contents over the next few years.

## **SMDDIC**

Now let's turn to the small and medium-sized display driver IC business. Declining sales into the smartphone market has been the key factor causing our P&L pressure over the last few quarters, especially considering that smartphone market had been the number one contributor to our top and bottom lines for many years in the past. We are determined to take back market share by securing more tier one customers with the existing TDDI products and advancing our technology to win the next generation TDDI market.

With that, now let me start the small and medium-sized display driver IC business update from a quick review on the first quarter smartphone business. Reflecting weak smartphone demand and a bigger-than-expected inventory correction by a major Chinese end customer, our first quarter TDDI shipment declined more than 30% sequentially. The fluctuation is high due to our rather concentrated customer base for the time being. Despite the unsatisfactory Q1 result, we made good progress in diversifying into other leading end customers, winning more strategic projects and starting to make production shipment of lower-end HD+ TDDI chips, primarily for a leading Korean smartphone end customer. As we said in the last earnings call, because of capacity constraint, we chose to limit our TDDI shipment to only higher-end FHD+ projects previously as they yield higher revenue and better margin. We are particularly pleased with the expanded partnership with the leading Korean smartphone customer which has

been a partner of ours for a long time. We expect more shipments for other leading smartphone makers to begin in the second half and possibly expand our end-product coverage of TDDI shipment to tablet market. Such new design-wins, new end customers and new markets will contribute to our TDDI sales in Q2 and a strong growth for the remainder of 2019.

Looking ahead, we are in the forefront of offering new generation TDDIs which will further enable narrow bezel panel design without the usage of COF packaging. As I just described earlier, COF material not only is costly but also suffers from serious supply constraint. This will provide a new option for smartphone design going forward. We are working on several design-in projects with our new generation TDDI with more customers in evaluation stage right now.

I just mentioned that we could potentially start shipping TDDI chips for tablet market within this year. In fact, it won't take long to also see the adoption of TDDI in automotive display, tablet with active stylus and even 2-in-1 notebooks. We are in the frontier in terms of exploring those opportunities and engagement with customers. Our TDDI for automotive display has started production shipment in Q1 to a leading panel customer for the use of a prominent car maker. The initial volume started small but the pipeline for next year's mass production looks promising. This could potentially resume the growth of our automotive segment and strengthen its gross margin amidst the stagnant car market worldwide. On tablet, our TDDI chips are under verification by panel makers. We expect revenue contribution to start from Q4 this year with a number of leading end customers. Furthermore, we are leading the industry in TDDI with active stylus by partnering with the world's leading brands for pen tablets and interactive pen displays. While both segments

are smaller than smartphone in terms of volume, they do represent growth areas for our TDDI solutions in the near future.

In addition to TDDI, we are also seeing a stronger second quarter for traditional discrete driver ICs in smartphone segment. Our design-win with a major Chinese smartphone maker went into production in March and shipment is set to expand strongly in Q2 per the customer's forecast. Notwithstanding this rebound, the trend of the traditional discrete driver ICs' addressable market being quickly replaced by TDDI and AMOLED in smartphone will continue. We expect the traditional discrete driver ICs for smartphone to decline substantially in the second half 2019.

Combining significantly more shipment of low-end TDDI and discrete smartphone driver, our Q2 sales into the smartphone market is expected to increase by close to 50% sequentially. However, such growth in revenue will lead to lower overall corporate gross margin as both products generate lower gross margin than the corporate average.

On AMOLED product line, we have been collaborating closely with leading panel makers across China for product development. We believe AMOLED driver ICs will be one of the long-term growth engines for our small panel driver IC business.

In automotive display segment, as Jackie reported earlier, our panel customers were greatly affected by the weakened worldwide automotive market demand during the first quarter. Many were forced to reduce shipments to major European makers due to the new and tightened European Union emission testing rules. Suffering from high inventory, our panel customers are foreseeing a sequential decline of shipments in the second

quarter for automotive segment. As Himax commands more than 30% of the global automotive display driver IC market, such wide range inventory correction has had a significant impact on our business. Q2 sales into this segment is likely to decrease by mid-single digit sequentially. Looking forward, on the backdrop of a feeble car market, the penetration of displays into vehicles is also maturing. Therefore, we may not be able to see the same kind of growth that we enjoyed in the past several years from automotive segment. However, we are still the leader in this space and we are leading the market in the introduction of new technologies including TDDI, AMOLED and local dimming timing controller. We believe such new technologies will rejuvenate the industry and bring our automotive sales back to a growth trajectory.

Our tablet and consumer electronics businesses represented around 10% of our total sales in the first quarter. Although the overall markets remain weak, we expect tablet business to rebound during Q2 for additional shipment to a leading end customer and white box market as well as improved foundry supply for this segment. As mentioned earlier, we also started to provide OEMs with samples for our world leading in-cell TDDI that supports the use of active stylus for tablet in the first quarter. We will report progress in due course. Combining tablet and consumer electronics businesses, we expect a sales increase of around 20% sequentially in the second quarter.

For second-quarter small and medium-sized driver IC business, we expect revenue to increase by more than 20% sequentially.

### **Non-Driver Product Categories**

Now let me share some of the progress we made on the non-driver IC businesses in the last quarter.

### **3D Sensing Business**

First on 3D sensing business update. We continue to participate in most of the smartphone OEMs' ongoing 3D sensing projects covering structured light and time-of-flight (ToF). At present, Android smartphone's front-facing 3D sensing adoption is still hindered by the high hardware cost, long development lead time, and the lack of killer applications. Instead of 3D sensing, most of the Android phone makers have chosen the fingerprint technology which can achieve similar phone unlock and online payment functions with a much lower cost. Reacting to their lukewarm response, we started to work on the next generation SLiM™ 3D sensing, aiming to leapfrog the market by providing high performance, easy to adopt and yet cost friendly total solutions, targeting the majority of Android smartphone players. Currently we have completed the feasibility study for our Gen 2 SLiM™ solutions covering detailed specifications, performance and cost. Our next step is to seek feedback from Android smartphone OEMs. With that, we will then determine the way forward for our 3D sensing total solution strategy. For the avoidance of doubt, we remain and are committed to be the leader in the optics for structured light 3D sensing where we are currently engaged in multiple development projects from multiple customers.

Being a leading provider of 3D sensing technology, we are also an active participant in smartphone OEMs' design projects for new devices involving ToF technology. We see ToF building momentum in such use cases as advanced photography, distance/dimension measurement and 3D depth information generation for AR. Unlike



structured light 3D sensing where we provide total solution or just projector module or optics depending on customers' needs, with ToF, we will only focus on transmitter module by leveraging our WLO related expertise.

I have mentioned previously that 3D sensing can have a wide range of applications beyond smartphone. We have started to explore business opportunities in various industries that are typically less sensitive to cost and always require a total solution. Among such projects is a collaboration effort with Kneron, an industry leader in edge-based artificial intelligence in which we have made an equity investment, to develop an AI-enabled 3D sensing solution targeting security and surveillance markets. We are also working with partners/customers on new applications covering home appliances and industrial manufacturing.

As to our capex investment for 3D sensing production capacity, while we still need to absorb the associated cost in the short term, the capacity is a strategic investment necessary to substantiate engagement with customers. The production capacity, which is primarily WLO fab, can be used not only to support our own SLiM™ total solution, it is essential for us to provide optics products to customers for their structured light or ToF 3D sensing projects. Furthermore, the WLO capacity can be used for various other product areas including, but not limited to, waveguide for AR goggle device where we are still getting frequent enquiries from top tech companies. As a matter of fact, having some readily available production capacity has become a competitive advantage to participate in leading customers' new design projects at a time when the smartphone product cycle, and therefore the design lead time, is getting shorter. With the capacity,

coupled with our unique knowhow in sophisticated diffractive optics design, we are often the partner of choice when customers are exploring advanced optical challenges.

## **WLO**

Next is some discussion on our WLO business. As anticipated, the first quarter WLO revenue declined substantially due to an anchor customer's lower seasonal demand. We expect further reduction for the second quarter. The much-reduced shipment will lead to lower capacity utilization and therefore negatively impact our Q2 gross margin. Himax's WLO business has been largely dependent on one anchor customer for the past couple of years, despite good design-in pipelines and collaboration projects with multiple customers. We were informed of a product replacement decision by the anchor customer after our last earnings call on February 19, 2019. Foreseeing that WLO shipment volume in 2019 will decline significantly starting from the third quarter, we disclosed the information in our 20-F filing in March. The filing also warned of the additional negative impact the anticipated volume fall-off would cause to our 2019 margin and profitability as the substantial cut-back of WLO fab capacity utilization would lead to higher equipment depreciation and fab overhead on a per unit basis. As it turns out, we have very recently been notified by the anchor customer of their new decision. Contrary to our earlier warning, we now expect the second half WLO shipment to increase significantly to a scale comparable to that of the same period last year with therefore similar amount of equipment depreciation and fab overhead charges on a per unit basis. As a semiconductor company, we are not immune to a customer's supplier decision which can work in or against our favor. We believe the customer's earlier replacement decision was a normal occurrence in the semiconductor industry and are pleased that its new decision has removed the concerns on the short-term impact over the revenue and profitability of

our WLO business. Regardless, we believe such incidents would not affect our long-term partnership with the anchor customer. In fact, we are very optimistic about the growth opportunities we have with the customer. We have many ongoing development projects for their future generation products centering around our exceptional design know-how and mass production expertise in WLO and related technologies.

### **CMOS Image Sensor**

On CMOS image sensor business updates, we continue to make great progress with our machine-vision sensor product lines. Himax and Emza unveiled the second generation WiseEye AIoT intelligent vision solution at the ISC West 2019 in early April. The solution is consisted of Himax's industry leading ultra-low power sensor and ASIC designs with Emza's unique AI-based, ultra-low power computer vision algorithm. The solution is uniquely positioned for AIoT markets featuring battery-powered human detection sensor, AI-based machine learning and always-on visual sensor, all operating at the edge device. Furthermore, it brings an enhanced user experience and better-informed decision-making running on minimal power and much better cost compared to similar solutions consuming much higher power. We are pleased with the status of engagement with leading players in areas such as connected home, smart building and security. In parallel, we are actively participating in the rapidly growing AIoT eco-system which we believe will open up further future opportunities for Himax.

For traditional human vision segments, we see strong demands in laptop and increasing shipment for multimedia applications such as car recorders, surveillance, drones, home appliances, and consumer electronics, among others.

## **LCOS**

I will now give an update on the LCOS business where our main focus areas are AR goggle devices and head-up-displays (HUD) for automotive. In 2018, many AR goggle devices were launched, targeting primarily niche industrial or business applications, with top name multinationals continuing to invest heavily to develop the ecosystem -- applications, software, operating system, system electronics, and optics. While AR goggles will take a few more years to fully realize its market potential, we believe LCOS remains the mainstream technology in this space. Our technology leadership and proven manufacturing expertise are evidenced by the growing list of AR goggle device customers and ongoing engineering projects. In addition, we continue to make great progress in developing high-end holographic head-up displays for high-end automotive. LCOS for both goggle device and HUD enjoy much higher ASP and better gross margin for us and represents a long-term growth driver for us.

For non-driver IC business, we expect revenue to increase by mid-single digit sequentially in the second quarter.

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, Jackie Chang, our CFO, 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!