Himax
Human Interface and Display Technologies

NASDAQ: HIMX

SECTOR: TECHNOLOGY
INDUSTRY: SEMICONDUCTORS

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SELECT FINANCIALS	
Fiscal Year	Dec. 31st
Last-Traded Price (08/05/20)	$4.25
Market Cap. (08/05/20)	$732.3M
50-Day Avg. Daily Vol.	~1.40M
Basic Weighted Avg. Out. ADS	172.3M
Cash (06/30/20)	$96.1M
2019 Revenues	$671.8M
2019 IFRS (Loss)	($13.6M)
2019 IFRS EPS (Loss)	($0.079) per ADS
Legal	Davis Polk & Wardewll
Auditor	KPMG
# Analyst Coverage	6

Himax Technologies, Inc. (NASDAQ: HIMX) is a fabless semiconductor solution provider dedicated to display imaging processing technologies. Himax is a worldwide market leader in display driver ICs and timing controllers used in TVs, laptops, monitors, mobile phones, tablets, digital cameras, car navigation, virtual reality (VR) devices and many other consumer electronics devices. Additionally, Himax designs and provides controllers for touch sensor displays, in-cell Touch and Display Driver Integration (TDDI) single-chip solutions, LED driver ICs, power management ICs, scaler products for monitors and projectors, tailor-made video processing IC solutions, silicon IPs and LCOS micro-displays for augmented reality (AR) devices and heads-up displays (HUD) for automotive. The Company also offers digital camera solutions, including CMOS image sensors and wafer level optics for AR devices, 3D sensing and machine vision, which are used in a wide variety of applications such as mobile phone, tablet, laptop, TV, PC camera, automobile, security, medical devices, home appliances and Internet of Things. Founded in 2001 and headquartered in Tainan, Taiwan, Himax currently employs around 2,000 people from three Taiwan-based offices in Tainan, Hsinchu and Taipei and country offices in China, Korea, Japan, Israel and the US. Himax has 2,926 patents granted and 553 patents pending approval worldwide as of June 30, 2020. Himax has retained its position as the leading display imaging processing semiconductor solution provider to consumer electronics brands worldwide.

Investment Highlights

- **Leading Imaging and Human Interfacing Technology Innovator**
- **Innovative New Products Capturing Growth Markets**
- **Diversified Base of Customers and Revenues**
- **Visionary Management Team**

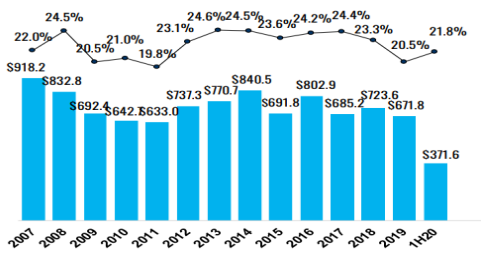
Financial Summary

	2Q2020	1Q2020	2Q2019	YoY	QoQ
Revenues	$187.0M	$184.6M	$169.3M	+10.4%	+1.3%
Gross Margin (%)	21.0%	22.7%	19.5%	+1.5%	-1.7%
IFRS Profit (Loss)	$1.4M	$3.3M	($5.2M)	+126.8%	-58.0%
IFRS Earnings (Loss) per ADS	$0.008	$0.019	($0.030)	+126.8%	-58.0%
Non-IFRS Profit (Loss)	$1.7M	$3.8M	($4.8M)	+136.2%	-54.3%
Non-IFRS Earnings (Loss) per ADS	$0.010	$0.022	($0.028)	+136.0%	-54.2%

3Q2020 Guidance

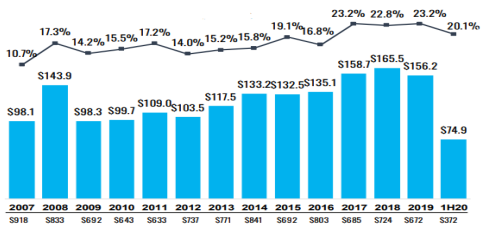
Revenues	Increase by around 20% sequentially
Gross Margin (%)	Expected to be flat to slightly down from second quarter, depending on our final product mix
IFRS Profit (Loss)	To be around 2.0 cents to 2.8 cents
Non-IFRS Profit (Loss)	To be around 3.5 cents to 4.3 cents

Revenues and Gross Margin %



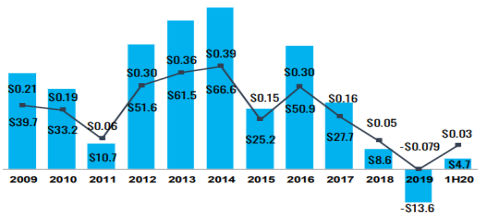
OPEX and % of Total Sales

(UnitM / %)

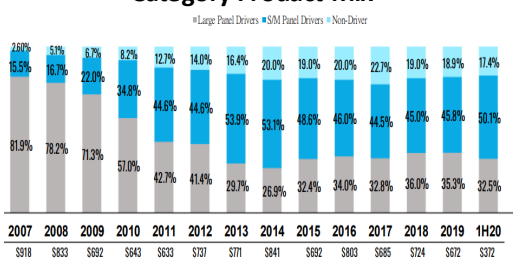


Profit and EPS

(US$M / US$)



Category Product Mix



Core Product Lines - Growth Opportunities

TDDI Technologies

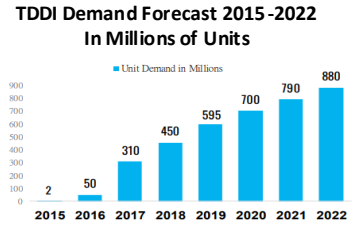
We design technologies for touch sensor displays including in-cell touch and the fast-growing segment of Display Driver Integration (TDDI) single-chips

Strategies and Market Position

TDDI PURE IN-CELL SOLUTION

- Numerous new design-wins and shipment with top-tier smartphone and tablet makers and most panel makers in China starting 4Q19. Expect strong growth in 2020
- In-cell TDDI becoming mainstream for tablet, Himax is the primary source for Android tablets. MP started for major tier-1 OEMs in 4 Q19, with growth continuing into 2020 and beyond
- New generation FHD+ TDDI with COF package to enable super-slim bezel design for premium smartphone and tablet models
- The new TDDI design-wins for smartphone and tablet applications with mass shipment started late 2019, expect robust growth by increasing market share from 5% to around 15% in 2020
- Himax is the dominant automotive TDDI technology provider with mass production experience for leading panel makers. Although only small volume shipments in 2020, we anticipate meaningful shipment volume to ramp up moving into 2021
- Higher ASP and better margin than traditional driver IC
- TDDI will be the biggest growth driver for Himax in 2020

htc ASUS NEC TECNO mobile oppo COMPAL LONGCHEER HUAWEI



Display Driver IC (DDIC)

We are a leader in display driver ICs used to enable flat panel display in TFT and Touch in large, small and medium-sized display panels

Strategies and Market Position

- Leading market share of large DDIC in China
- Major beneficiary of Industry and Korean fab restructuring which will increase Chinese panel maker's global market share
- Increased shipments of 4K solutions and collaboration with major panel makers on the development of next generation 8K TVs
- Next generation display for smartphone and automotive, Himax is the leader in key technologies such as TDDI, and local dimming timing controller
- 8K TV is a strategic area for Himax due to its higher display driver and Tcon content and high technical barrier of entry

SAMSUNG INNOLUX BOE lenovo TCL TECNO mobile vivo SHARP Panasonic TRULY 上海天馬微電子有限公司 SHANGHAI TIANMA MICRO-ELECTRONICS CO.,LTD. ZTE中兴 IVO LG Display 华星光电 CSOT JDI MEIZU oppo AUO CEC 中国电子 CHOT HUAWEI HKC 惠科股份 HannStar Eink. KYOCERA TOPPAN amazon

WLO and 3D Sensing

We offer WLO design know-how and mass production expertise for 3D sensing solutions including; structured light and time of flight (ToF)

Strategies and Market Position

- WLO: Exceptional design know-how and mass production expertise deliver consistent product quality and high yields for WLO anchor customer's large-scale adoption since 2017 with ongoing shipment in 2020
- Continue to participate in most ongoing 3D sensing projects covering structured light for non-smartphone application and time-of-flight (ToF) for smartphone 3D, focusing on transmitter module by leveraging our WLO related expertise
- WLO 3D sensing projector in ToF WF module for Android smartphone will be the largest new growth opportunity for Himax moving forward. Ongoing design -in activities providing optical component or projector to our tier-1 smartphone OEM customers
- 3D Sensing for non-smartphone, working with industry-leading facial recognition algorithm and application processor partners to develop new 3D sensing application for smart door lock and payment system
- 3D Sensing will be the largest growth opportunity for Himax beyond 2020

CIS and Ultralow Power Smart Sensing

CMOS image sensors include near infrared (NIR) sensors for 3D sensing and ultralow power computer vision, Always-on-Sensor (AoS™), and customized sensors for optical finger print solutions

Strategies and Market Position

- Himax Ultralow power CMOS Image Sensor:
  - Industry first ultralow power and low latency Back-Illuminated CMOS Image Sensor solution with autonomous modes of operation for always on, intelligent visual sensing applications
  - The VGA resolution can double the range of detection over QVGA resolution, especially to support 90 degree wide field of view lens
  - First mover advantage and have garnered attention and support from leading AI framework provider, ecosystem providers, and others in the industry. Represent significant growth opportunity
  - Reference design win for Google TensorFlow Lite
- WiseEye NB 2.0 solution contains Himax's industry leading CMOS image sensor and ASIC designs with Emza's AI-based algorithm. All with low power features. Will enable next generation AI-based computer vision technology with ultralow power for NB and many other markets. Expect shipment to Tier-1 NB OEM in 2020. High ASP
- WiseEye WE-I plus as an edge AI computing platform solution, is aggressively joining the edge computing ecosystem by working closely with machine learning framework provider, tool chain developers, AI algorithm developers and OEM/ODM to provide flexible and cost-effective solutions to fulfill this booming but diversified market
- CIS include near infrared (NIR) sensors for 3D sensing and ultralow power

LCoS Microdisplays

We are the leader and long-term innovator of Liquid Crystal on Silicon (LCoS) displays and the only company capable of high-volume production runs of LCoS displays for the launch of mass-market devices

Strategies and Market Position

- The leader in microdisplays with patent-protected technology, in-house facilities and shipping record of > 2M units
- Focus on AR goggle devices and HUD for automotive applications
- List of AR goggle device customers covers many of the world's biggest tech names. Many have demoed their new AR goggles at CES 2020
- On-going collaboration with Global Tier 1 AR glasses device manufacturers since 2011
- Design-wins of high-end HUD for the automotive sector, target 2022 MP
- LCOS is one of the mainstream technology for AR goggle devices
- LCOS represents a long-term growth opportunity for Himax

Management Team

Dr. Biing-Seng Wu, Chairman of the Board - Dr. Wu, the founder of Himax, previously served as President, CEO and a Director of Himax Taiwan. As a pioneer of TFT-LCD panel industry in Taiwan, Dr. Wu has been active in the TFT-LCD panel industry for over 20 years. With 61 patents related to Flat Panel Display granted worldwide, Dr. Wu has made significant contributions to Taiwan panel industry including the completion and operation of Taiwan's very first TFT-LCD plant, the winner of Outstanding Industry Contribution Award at the Gold Panel Awards 2009 from Ministry of Economic Affairs, etc. Dr. Wu holds a B.S. degree, an M.S. Degree and a Ph.D. Degree in Electrical Engineering from National Cheng Kung University. With well-recognized outstanding research and development capabilities, Dr. Wu received numerous awards including National Invention Award of Taiwan from Taiwan Executive Yuan in 1992, Research Achievement Awards from Industrial Technology Research Institute for two consecutive years in 1992 and 1993, ERSO Award from Pan Wen Yuan Foundation in 2008.

Jordan Wu, President, CEO and Director - Mr. Wu, co-founder of Himax, previously served as the Chairman of the Board of Himax Taiwan since April 2003. Prior to joining Himax Taiwan, he served as CEO of TV Plus Technologies, Inc. and CFO and Executive Director of DVN Holdings Ltd. in Hong Kong. Mr. Wu holds a B.S. degree in Mechanical Engineering from National Taiwan University and an M.B.A. degree from the University of Rochester.

Jessica Pan, Chief Financial Officer - Jessica joined Himax in 2006 with over 22 years of experience in finance and accounting. Jessica has played an integral role at Himax on finance, accounting, financial planning and analysis, forecasting and tax, having served as interim Chief Financial Officer from October 2010 to January 2012. Prior to joining Himax, Jessica worked as Assistant Finance Manager for Advanced Semiconductor Engineering, Inc. from 2002 to 2006 and as Auditor at Arthur Andersen LLP in Taiwan from 1998 to 2001. She holds a B.S. degree in Agriculture Chemistry from National Taiwan University and an M.B.A. degree from the State University of New York at Buffalo.

Eric Li, Chief IR/PR Officer - Joining Himax in 2012, Mr. Eric Li has an extensive experience in image processing related IC design, having worked in the areas of sales, marketing, R&D and served as Associate Vice President at Himax covering the Intelligent Sensing AI product line. Previously worked in video processing ASIC service and TV/monitor ASSP products before he was put in charge of the fab construction and WLO advanced optics operation. He holds a B.S. degree in Nuclear Engineering from National Tsing Hua University and an M.S. degree in Computer and Information Science from New Jersey Institute of Technology.