

昇佳電子 投資人會議



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昇佳電子股份有限公司

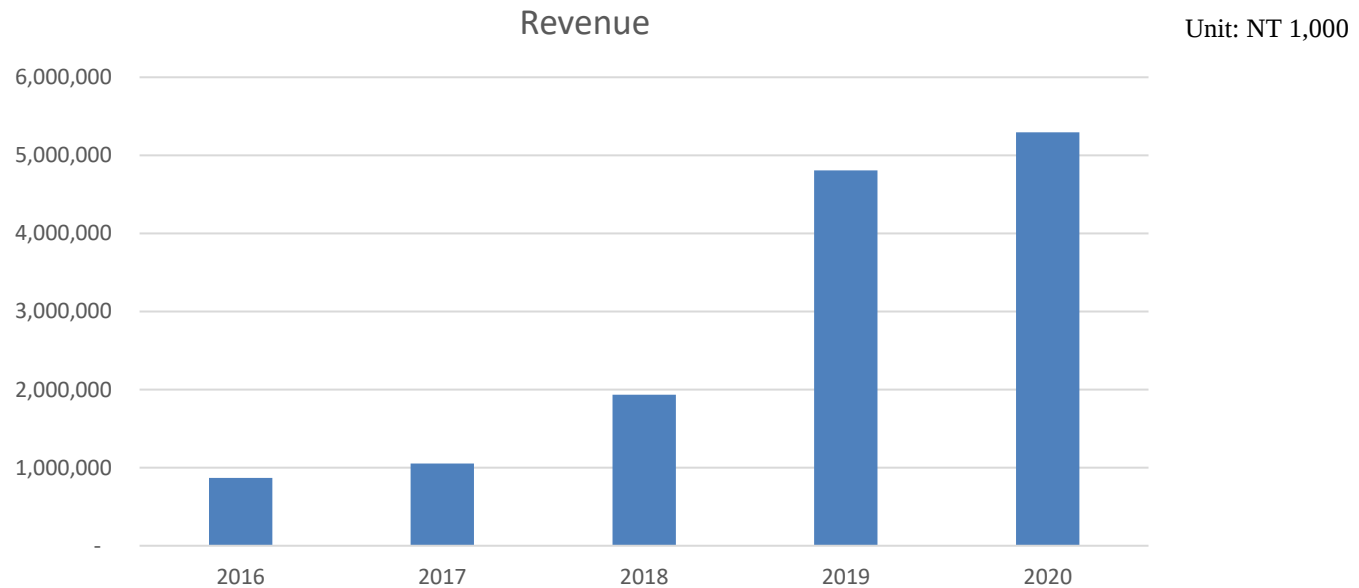
關於我們

Company Name	Sensortek Technology Corp.	
Founded	December 1, 2009	
Capitalization	NT 489,126,180	
Chairman and CEO	Sheng-Su Lee	
Number of Employees	163	
Location	Tai Yuen Hi-Tech Industrial Park, Jhubei City, Hsinchu County	
Products	• 光學感測晶片 Optical Sensor - 近接感測晶片 Proximity Sensor (PS) - 環境光感測晶片 Ambient Light Sensor (ALS) - 色彩感測晶片 Color Temperature Sensor (RGB) • 微機電感測晶片 MEMS Sensor - 加速度感測晶片 Accelerometer Sensor (GS)	
Listing	上櫃 Taipei Exchange Market (TPEX) 06/08/2020 興櫃 Emerging Stock Market (TESM) 06/18/2019	

里程碑

- 2009: Team established
- 2010: [Optical] Proximity (PS) & ambient light sensors (ALS)
- 2012: [MEMS] Accelerometers (g-sensors)
- 2013: Spinoff
- 2017: [Optical] Invisible PS+ALS solution
- 2018: [Optical] Under display & slit type PS+ALS solution
[MEMS] Low-power g-sensors
- 2019: [Optical] RGB sensors for smartphone screens
- Listed at the Emerging Stock Market (TESM) 興櫃
- 2020: Listed at the Taipei Exchange Market (TPEX) 上櫃
[Optical] RGB + flicker sensors for smartphone cameras

財務數字



Item	2016	2017	2018	2019	2020
Revenue	869,687	1,053,451	1,935,513	4,806,152	5,296,054
Gross margin	137,375	158,184	649,442	2,018,872	2,127,828
Margin %	15.80%	15.02%	33.55%	42.00%	40.18%
Operating income	4,931	8,751	366,646	1,497,236	1,537,189
Net income	5,169	5,309	326,275	1,322,900	1,365,454
EPS (NT\$)	0.14	0.14	8.64	35.01	28.81

Note: The EPS values listed here are based on the capital of 37,781 thousand shares.

損益表

Item	Q2 21		H1 21		Q1 21		Q2 20		H1 20	
	Results	% of sales	Results	% of sales	Results	% of sales	Results	% of sales	Results	% of sales
Net Sales	1,498,477	100%	2,767,018	100%	1,268,541	100%	1,024,529	100%	2,375,012	100%
Gross Profit	724,261	48%	1,237,217	44%	512,956	40%	420,572	41%	969,830	41%
Operating Expense	199,247	13%	367,153	13%	167,906	13%	112,178	11%	256,350	11%
Operating Income	525,018	35%	870,073	31%	345,055	27%	308,394	30%	713,480	30%
Income before Tax	536,490	36%	887,167	32%	350,677	27%	311,413	30%	725,953	31%
Net Income*	450,917	30%	746,485	27%	295,568	23%	274,929	27%	639,003	27%
EPS	9.22	-	15.26	-	6.04	-	5.93	-	13.93	-

Unit: NT\$ thousands (except EPS)

Accounting standard: IFRS

* Listed on the English translation of our financial statements as
"Profit (loss), attributable to owners of parent"

資產負債表

Item	2021/6/30	2021/3/31	2020/12/31	2020/9/30	2020/6/30	2020/3/31
Total Assets	7,034,889	6,546,874	6,213,228	5,665,950	5,920,992	3,937,918
Current Assets	5,738,903	5,288,197	5,718,727	5,500,709	5,785,995	3,824,883
Cash & Equivalents	3,402,027	2,215,010	3,086,052	1,743,561	1,895,897	1,471,630
AR	489,591	450,143	452,893	489,647	470,727	542,826
Inventory	425,377	305,180	320,395	382,448	605,743	595,547
Total Liability	2,793,386	2,780,120	1,665,215	1,459,386	2,121,747	2,581,779
AP	802,201	688,059	759,395	616,844	527,754	816,834
Shareholder Eqt.	4,241,503	3,766,754	4,548,013	4,206,564	3,799,245	1,356,139

Unit: NT\$ thousands
Accounting standard: IFRS

光學感測晶片 Optical Sensors

Proximity Sensors (PS)

近接感測晶片 → 關屏防誤觸
turns off the display (anti-touch)

Ambient Light Sensors (ALS)

環境光感測晶片 → 調節螢幕亮度
screen brightness control

- G1: PS + ALS 2-in-1 visible solution (2010)
- G2: PS + ALS 2-in-1 invisible solution (2018)
 - Under-display 屏下方方案 for AMOLED displays
 - Slit type 狹縫方案 for TFT displays

Color temperature Sensors (RGB)

色溫感測晶片 → 調節螢幕色溫
screen color temperature control

- G3: PS + RGB sensors (2019)
 - for better reading experience

Camera RGB sensors

色溫感測晶片 → 協助後相機白平衡校正
white balance correction (2020)

Flicker detection sensors

閃頻偵測晶片 → 協助消除光源物理閃爍
Flicker detection (2020)

PS + ALS shipment

2018 : >340M pcs
2019 : >650M pcs
2020 : >720M pcs



Waterdrop Screen

狹縫(Slit) ALS/PS
狹縫(Slit) PS / 屏下 ALS
前攝旁 ALS/PS
(Aside of Front Facing Camera)



Bezel-less Screen

屏下(Under-display) ALS/PS
狹縫(Slit) PS / 屏下 Under-display ALS



感度提升→ 單價提升

G1: PS + ALS visible solution 1x

G2: PS + ALS invisible solution → sensitivity 3x → 6x → 10x
- Under-display solution for AMOLED

G3: PS + RGB visible solution

G4: PS + RGB invisible solution

水滴屏 (Teardrop-shaped)



全景屏 (Full screen)



瀏海屏 (Notch type)



開孔屏 (Aperture type)



Upgrading because of increases in...

1. Display resolution
2. PPI density
(resulting in a decrease in light transmittance)
3. AMOLED penetration rate



16:9 → 18:9 → 19:9 ...

智慧手機相機之色溫 + 閃頻感測晶片

RGB Sensors

Camera RGB sensors are used for white balance correction. Different light sources come with different color temperatures, which can create unrealistic color casts in photos. White balance is the process of removing such color casts so that objects that appear white in person are rendered white in the photo. The white balance is automatically corrected and adjusted based on the color temperatures measured by the RGB color temperature sensor and the image sensor.

Flicker Sensors

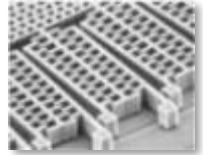
1. Detects the 50 Hz or 60 Hz flickers produced by incandescent or fluorescent lights.
2. Helps eliminate the streaks and distortion effects caused by the flickering.



微機電感測晶片 MEMS sensors

G-sensor shipment

2018 : >30M pcs
2019 : >55M pcs
2020 : >80M pcs



Accelerometers (G-sensors)

→ Rotation detection

加速度感測器 → 屏幕旋轉偵測

✓ G-sensors for smartphones

✓ Low-power G-sensors for wearable & IoT devices



屏幕旋轉
Screen rotation



遊戲
Game control



手勢偵測
Gesture detection



穿戴裝置: 光感 + 微機電

True wireless stereo (TWS) earbuds

Accelerometers → click detection 敲擊偵測

Proximity sensors → on/off switch 功能啟用開關



FreeBuds 3

敲擊偵測 Click detection

- 有來電時 Incoming call
 - 單擊接聽 Click to answer
 - 雙擊拒接 Double click to reject
- 音樂播放 Music mode
 - 單擊暫停 Click to pause
 - 雙擊換曲 Double click to switch

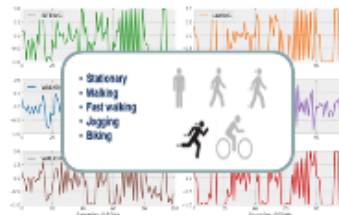
Smart watches & fitness trackers

Accelerometers → motion detection 移動偵測

Optical sensors → heartbeat detection 心律偵測 & UV sensors 紫外線感測



運動偵測 / 計步 Motion detection



抬手亮屏 / 動態心率輔助 Heartbeat detection



睡眠偵測 / 久坐提醒 Sleep quality monitoring



2020



2021

Flagship 旗艦機

Addressable Market
300-400M/year

Opticals for Displays
Under display
PS+ALS (VCSEL)
Visible
PS+RGB (VCSEL)

Opticals for Cameras
RGB + flicker sensors

High end 高階機

Addressable Market
300-400M/year

Opticals for Displays
Slit type
PS+ALS (IR LED / VCSEL)
Under display
PS+ALS (VCSEL)

Opticals for Cameras
RGB + flicker sensors

Mid range 中階機

Addressable Market
400-500M/year

Opticals for Displays
Slit type
PS+ALS (IR LED)

Opticals for Cameras
Flicker sensors

Low end 低階機

Addressable Market
400-500M/year

Opticals for Displays
Slit type
ALS only

MEMS
Accelerometers

展望未來

Flagship 旗艦機

Addressable Market
300-400M/year

Opticals for Displays
Under display
PS+ALS (VCSEL)
Visible
PS+RGB (VCSEL)

Opticals for Cameras
RGB + flicker sensors

High end 高階機

Addressable Market
300-400M/year

Opticals for Displays
Slit type
PS+ALS (IR LED / VCSEL)
Under display
PS+ALS (VCSEL)

Opticals for Cameras
RGB + flicker sensors

MEMS
Accelerometers
+ Gyroscopes

Mid range 中階機

Addressable Market
400-500M/year

Opticals for Displays
Slit type
PS+ALS (IR LED)

Opticals for Cameras
Flicker sensors

MEMS
Accelerometers
+ Gyroscopes

Low end 低階機

Addressable Market
400-500M/year

Opticals for Displays
Slit type
ALS only

MEMS
Accelerometers

敬請期待

