

# Investor Conferences

2Q 2022

Sitronix Technology Corp.

矽創電子股份有限公司

8016: TT

**Sitronix**

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# 公司簡介

公司名稱	矽創電子股份有限公司
成立日期	1998年7月
資本額	40M USD
董事長暨執行長	毛穎文 Vincent Mao
臺灣證券交易所上市	2003年12月 ( 8016 )



## Consolidated

矽創電子

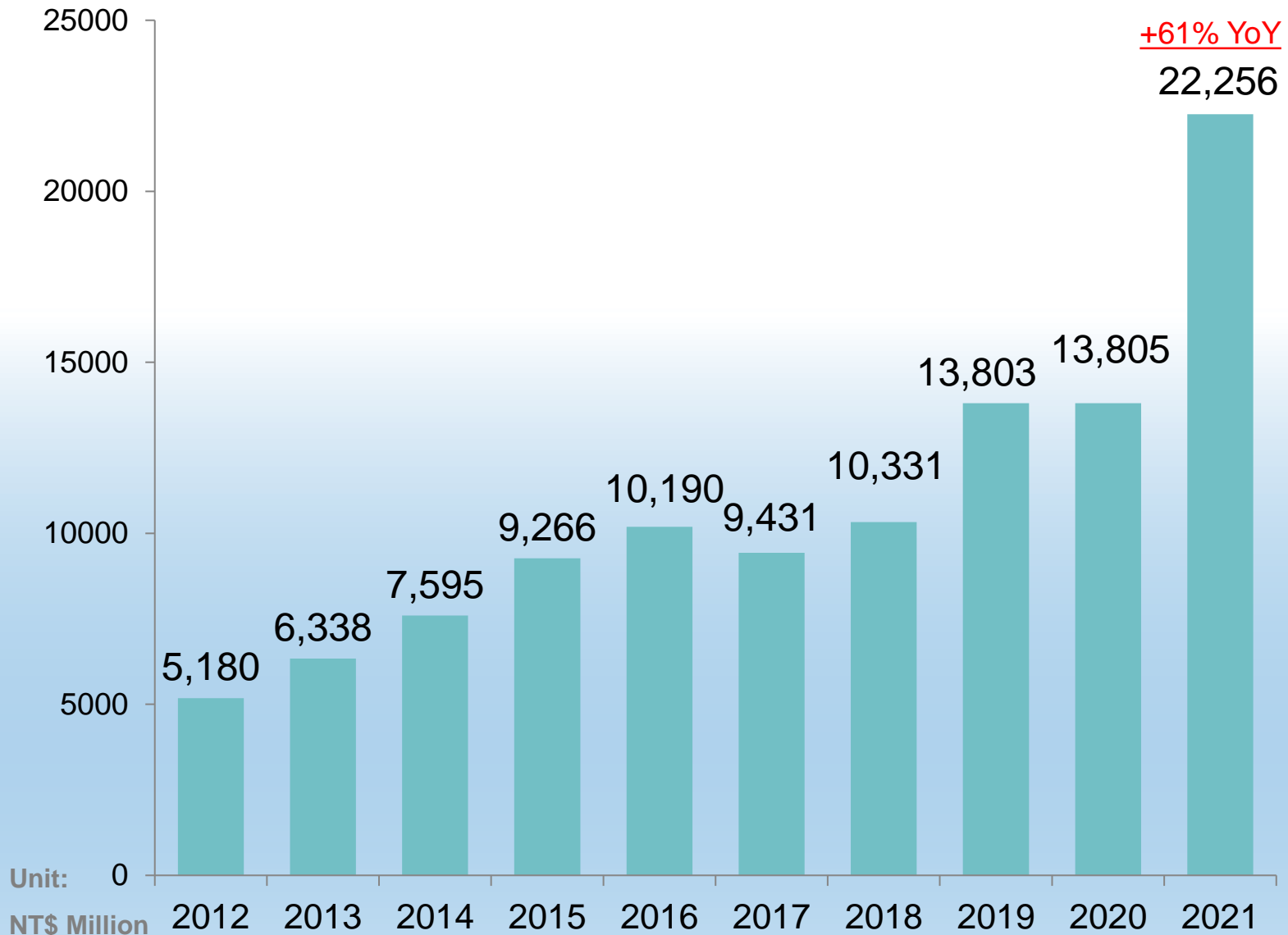
**Sitronix**

Display Driver IC

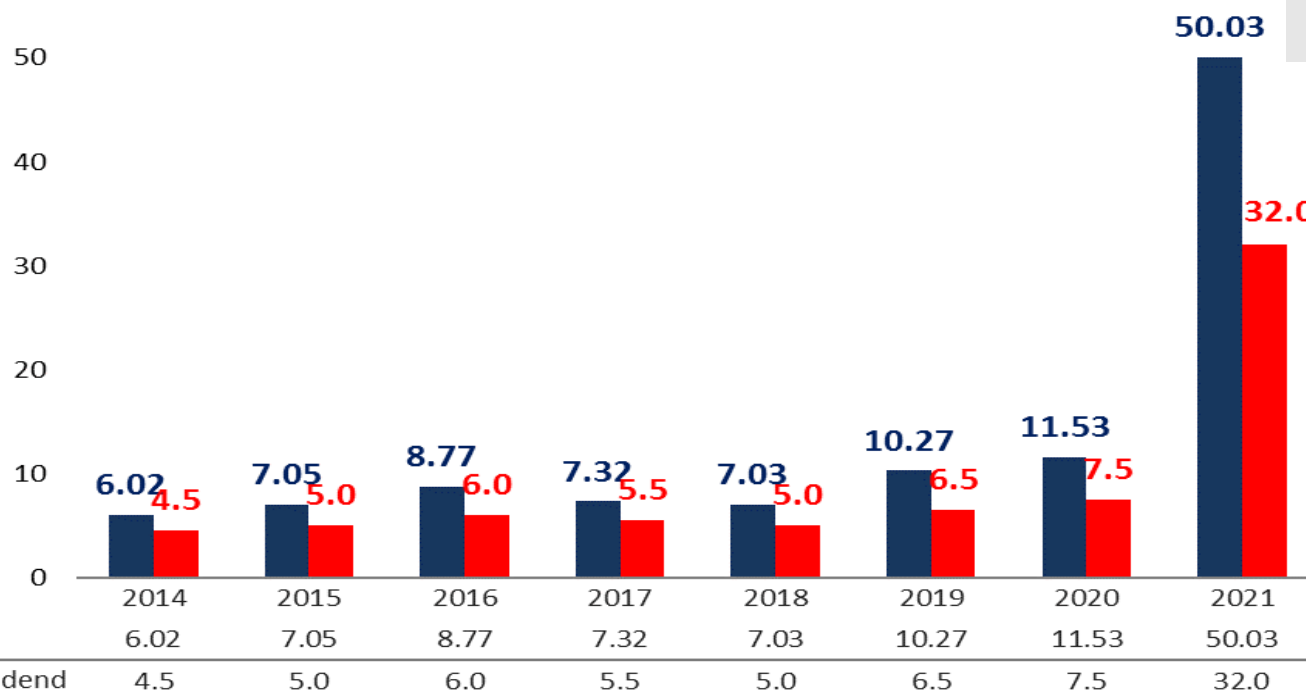
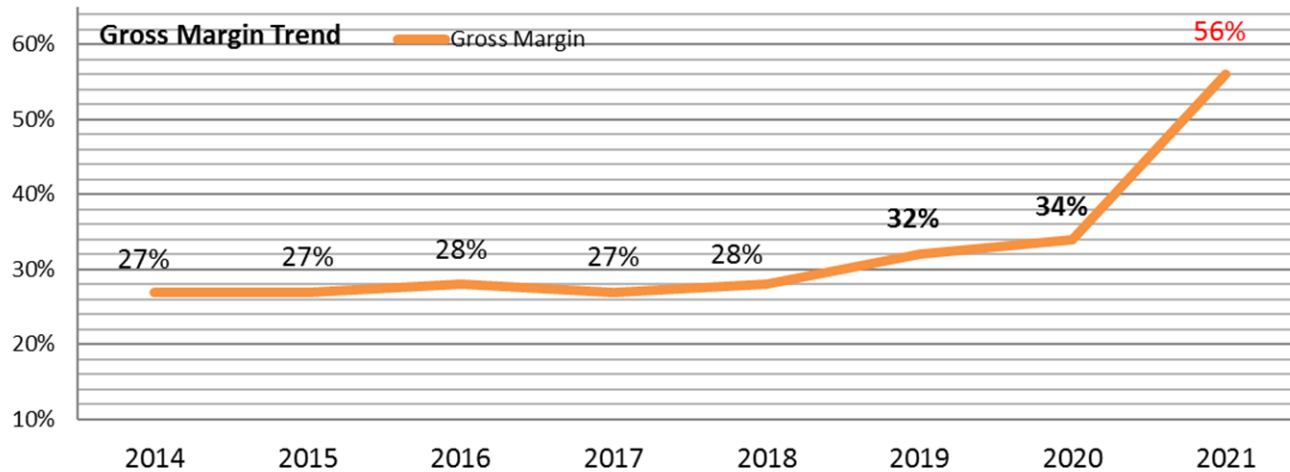


Incubator since 2009

# 矽創集團合併營收



# EPS & 毛利趨勢

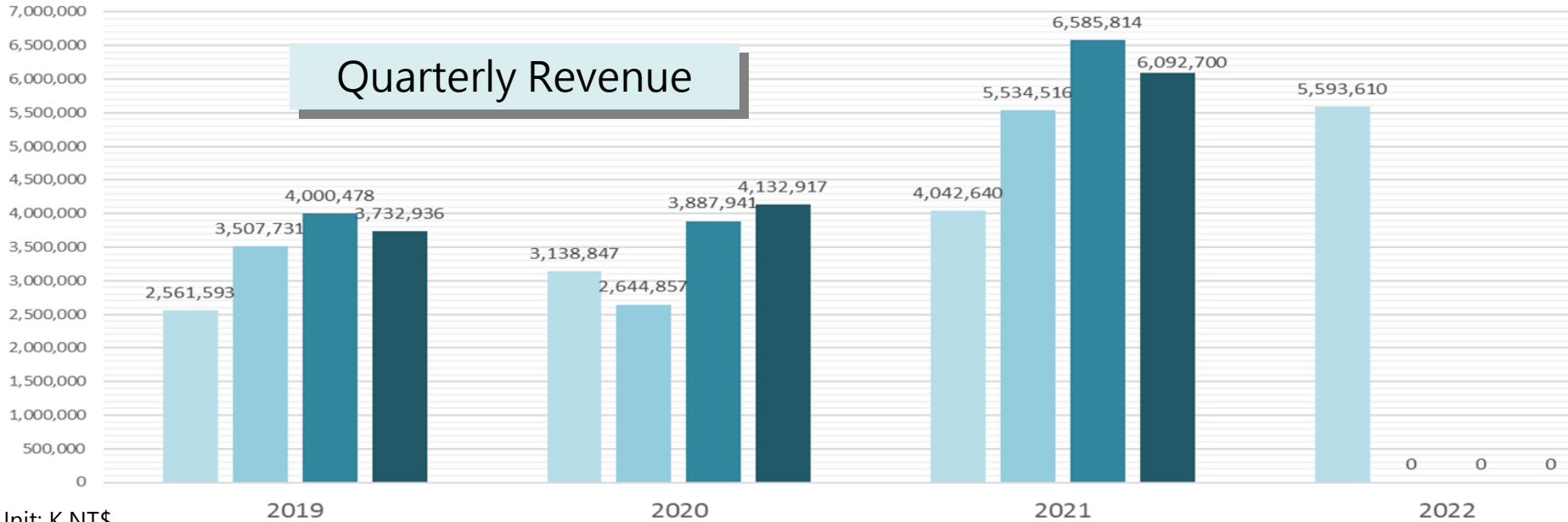


Unit: NT\$  
Accounting  
standard: IFRS

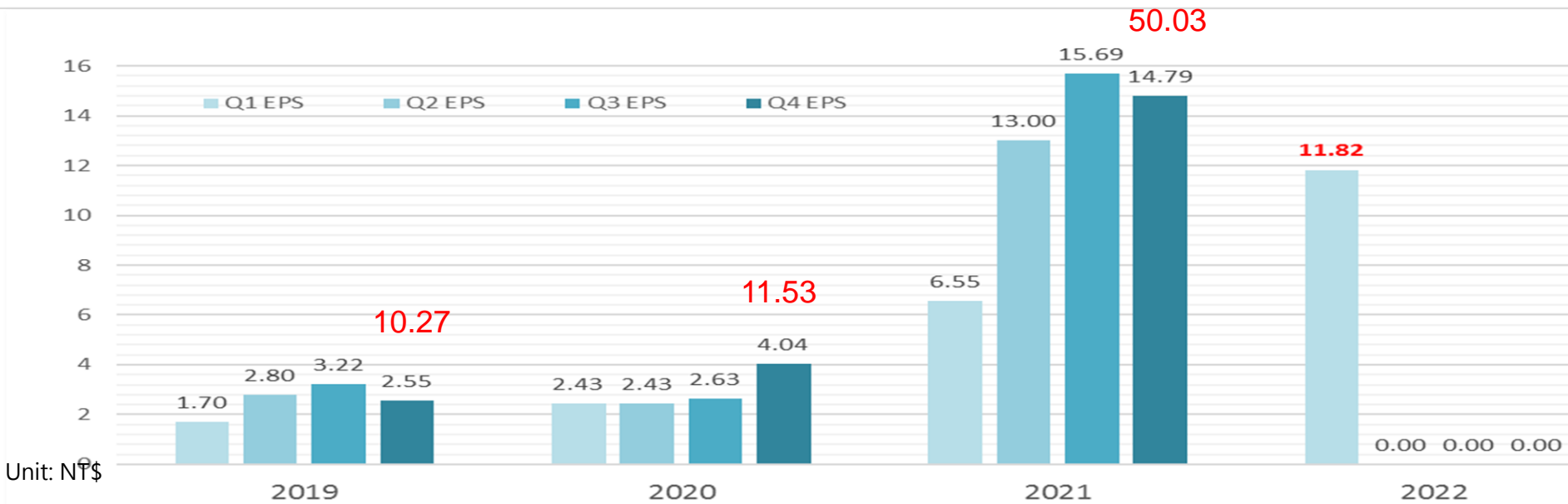
■ EPS  
■ Dividend

# 合併季營收 & EPS

## Quarterly Revenue



Unit: K NT\$



Unit: NT\$

# 8016 損益表

Item	Q1 22		Q1-Q4 21		Q4 21		Q3 21		Q2 21		Q1 21		Q1-Q4 20	
	Results	% of sales	Results	% of sales	Results	% of sales	Results	% of sales	Results	% of sales	Results	% of sales	Results	% of sales
Net Sales	5,593,610	-	22,255,670	-	6,092,700	-	6,585,814	-	5,534,516	-	4,042,640	-	13,804,562	-
Gross Profit	3,011,343	54%	12,351,136	56%	3,498,307	57%	3,799,273	58%	3,146,831	57%	1,906,725	47%	4,785,825	34%
Operating Expense	1,063,741	19%	4,202,687	19%	1,158,356	19%	1,216,581	19%	1,058,320	19%	769,430	19%	2,495,301	18%
Operating Income	1,947,900	35%	8,156,897	37%	2,340,232	38%	2,584,478	39%	2,094,621	38%	1,137,566	28%	2,383,048	17%
Income before Tax	2,067,536	37%	8,353,772	38%	2,403,100	39%	2,649,223	40%	2,144,026	39%	1,157,423	29%	2,523,626	18%
Net Income*	1,417,887	25%	6,005,760	27%	1,775,335	29%	1,883,701	29%	1,560,121	28%	786,603	19%	1,384,818	10%
EPS	11.82	-	50.03	-	14.79	-	15.69	-	13.00	-	6.55	-	11.53	-

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"



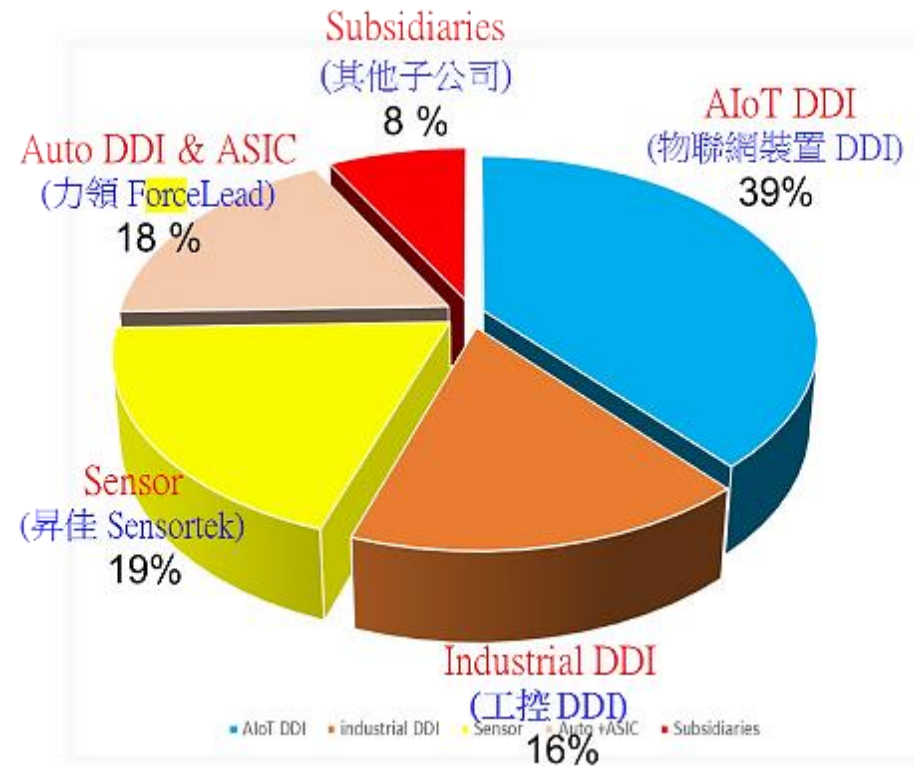
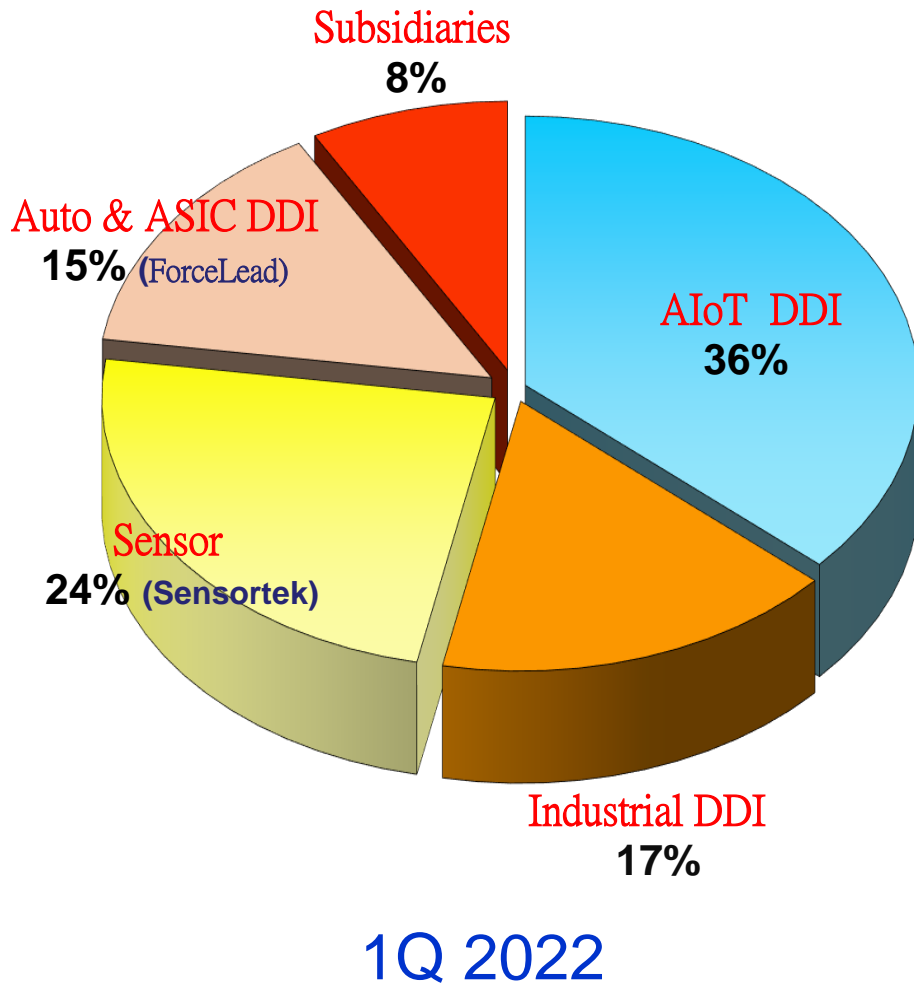
# 8016 資產負債表

Item	2022/3/31	2021/12/31	2021/9/30	2021/6/30	2021/3/31
<b>Total Assets</b>	25,874,023	22,672,777	19,949,309	18,007,392	15,205,696
<b>Current Assets</b>	21,049,198	18,086,920	16,051,297	14,619,722	12,168,616
<b>Cash &amp; Equivalents</b>	9,953,822	7,930,508	7,951,964	8,189,048	5,352,063
<b>AR</b>	2,086,052	1,952,110	1,902,991	1,652,183	1,335,828
<b>Inventory</b>	3,418,072	2,450,568	1,995,865	1,980,952	1,778,865
<b>Total Liability</b>	13,659,083	7,475,710	6,968,459	7,263,450	6,341,128
<b>AP</b>	2,868,209	2,480,335	2,291,092	2,089,573	1,965,114
<b>Shareholder Eq.</b>	12,214,940	15,197,067	12,980,850	10,743,942	8,864,568

Unit: NT\$ thousands  
Accounting standard: IFRS



# 產品組合佔比



# AIoT裝置顯示器驅動 ICs

## Small-sized DDIC ... 1-3 inch displays

2018: 500M pcs  
2019: 400M pcs  
2020: 300M pcs

### 4G kids' watches



### Sports cams Pocket cams



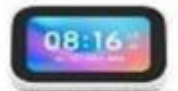
### Fitness trackers



## Mid-sized DDIC ... 4-6 inch displays

2018: > 130M pcs  
2019: > 250M pcs  
2020: > 320M pcs

### Smart speakers

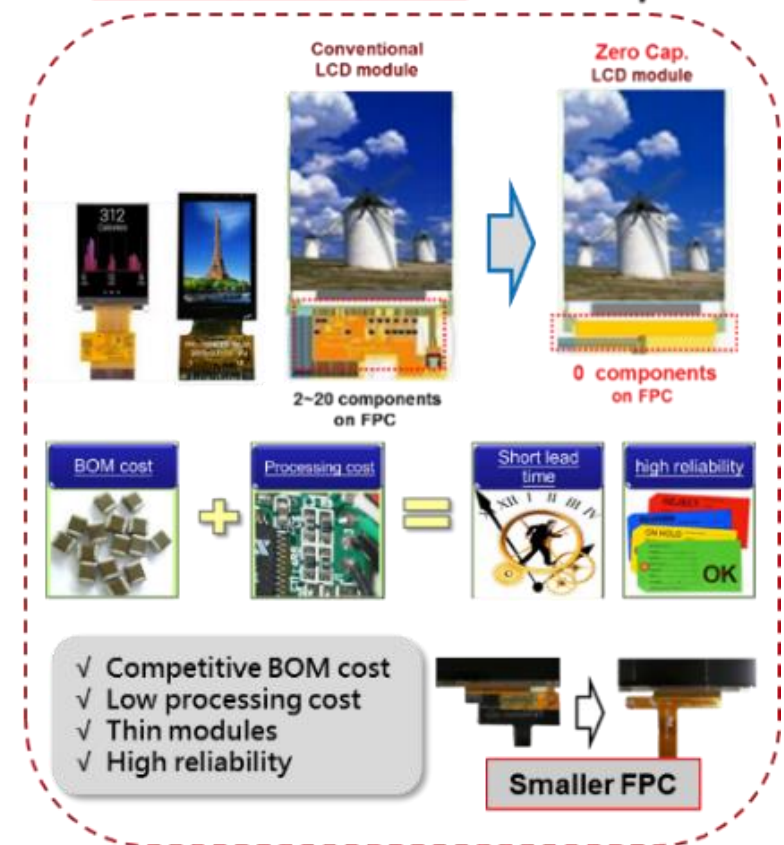


### Payment terminals



## Differentiation

Sitronix's Patents



參考附件僅供示意參考  
For illustration purposes only.

# AIoT applications

## Tablet & Touch & POS & industrial

- WXGA Tablet
- HD Tablet
- FHD Tablet



## Work From Home

- Projector
- Printer
- Sound Station



## Wearable

- QQVGA for Band
- QVGA for Watch
- OLED for Band & Watch

## Outdoor & Automotive

- Sport Cams
- Navigator
- Aerial camera
- CSD / HUD
- E-mirror
- Cluster / Knob



## Medical

- WVGA for Monitor
- Portable Medical
- QQVGA for thermometer



## Smart Home

- WVGA for Echo
- QVGA for Door lock
- FHD Tablet







# Auto Display Driver ICs

< 6 inch displays

7 - 9 inch displays

Diversification

**Instrument Cluster Display**

- Analog No Display
- Hybrid (Analog + Digital) Meters
- Full Digital Virtual Cockpit



**Automobile Monitors**

- Multi-Function CSD
- Display Audio
- Climate Control
- Rearview Mirror Display
- Overhead Monitor
- Twin CSDs Display Audio + Navigation
- Dual Headrest

- Segment TN
- Character TN
- Graphic STN
- Mono TFT
- Color TFT



參考附件僅供示意參考  
For illustration purposes only.

# Optical Sensors 光學感測晶片

## Optical sensor for displays :

### 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)
- G4: PS + RGB sensors (2021)
  - Slit type & under display
  - for better reading experience

PS + ALS shipment

- 2019 : >650M pcs
- 2020 : >720M pcs
- 2021 : >660M 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)

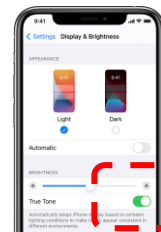


### Bezel-less Screen

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



Sensitivity & feature Upgrades → ASP Boosts  
感度及功能提升 → 平均價格提升



- G1: PS + ALS visible solution 1x
- G2: PS + ALS invisible solution → 3x → 6x → 10x (MP) (H sensitivity)
  - Under-display solution for AMOLED
- G3: PS + RGB visible solution (2019) 1x
- G4: PS + RGB invisible solution (2021) 3x (MP)

# Optical Sensors 光學感測晶片

## Optical sensor for Cameras :

### 3ch RGB sensor

色溫感測晶片 → 協助後相機白平衡校正  
white balance correction (2021)

### Flicker detection sensors

閃頻偵測晶片 → 協助消除光源物理閃爍  
Flicker detection (2021)



### 3ch RGB sensor :

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..

環境中充斥著各種不同的光線，這些光線有著不同的色溫，因此手機數位相機在進行拍照時，需要對這些光線進行校正，才能呈現出正常的白色。依據 RGB色溫感測器、影像感測器所測量的色溫來自動校正調整白平衡。



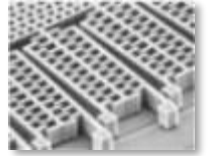
### Flicker detection sensors :

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

用於檢測環境中由白熾燈或螢光燈所產生的50Hz或60Hz光源物理閃爍。協助手機攝像頭之圖像系統能夠消除人造光源的閃爍而出現的條紋和失真效果。

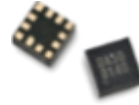


# MEMS sensors 微機電感測晶片



## G-sensor shipment

2019 : >55M pcs  
2020 : >80M pcs  
2021: >120M 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



# 2021: 三個感知器參與手機應用

We are developing high-performance products and moving to high-end

2010 - 2018

2019 – now

Entry-Level

Mid range

High end

Flagship

Addressable Market  
400-500M/year

Addressable Market  
400-500M/year

Addressable Market  
300-400M/year

Addressable Market  
300-400M/year

Opticals for Displays

Slit type  
ALS only

Opticals for Displays

Slit type  
PS(IR LED)+ALS

Opticals for Displays

Slit type  
PS(IR LED)+ALS  
Under display  
PS(VCSEL)+ALS

Opticals for Displays

Under display  
PS(VCSEL)+ALS  
PS(InP)+ALS  
Visible  
PS (VCSEL)+RGB

MEMS

Accelerometers

Opticals for Cameras

Flicker sensors

Opticals for Cameras

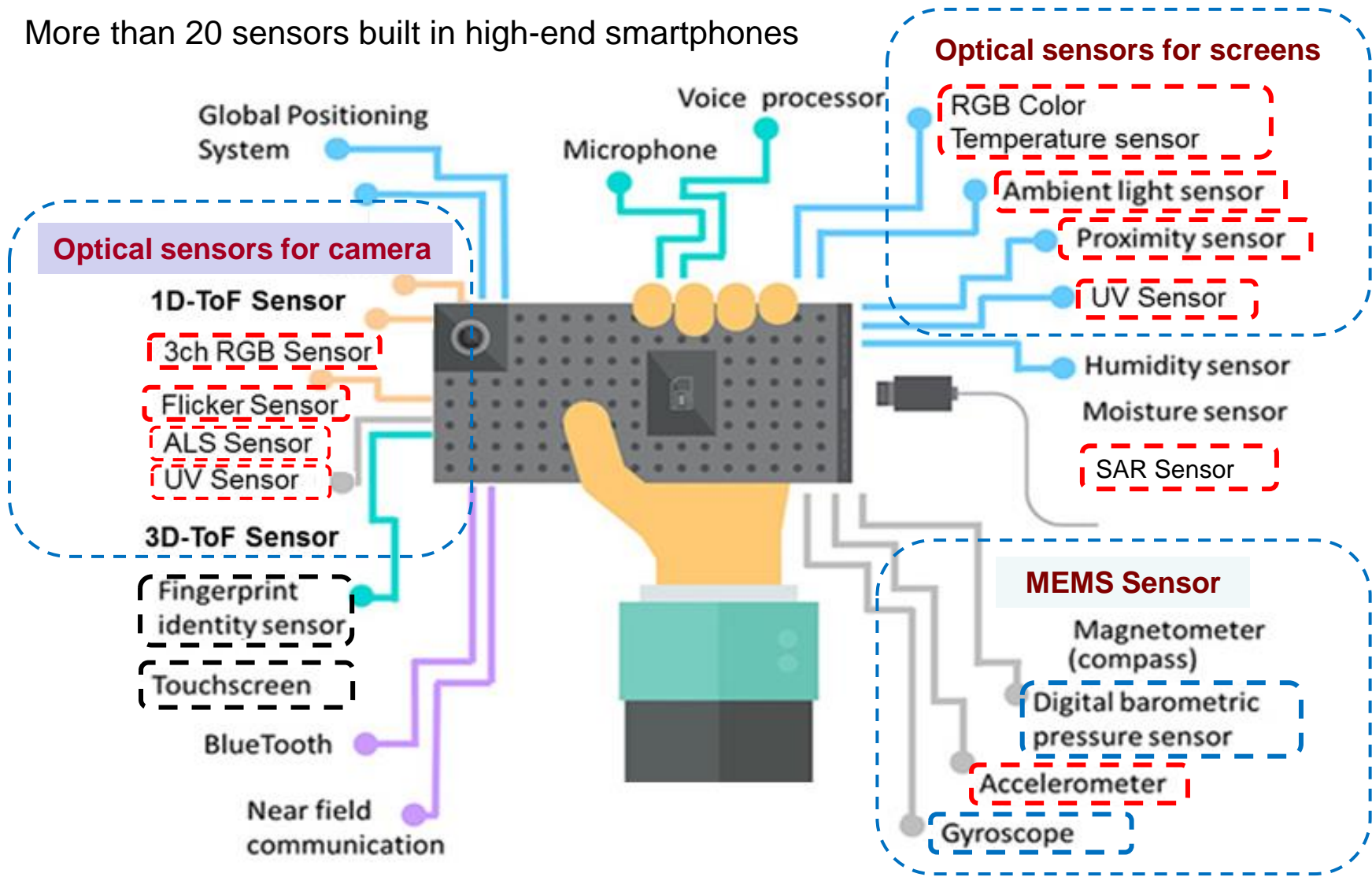
RGB + flicker sensors

Opticals for Cameras

RGB + flicker sensors

# 敬請期待

More than 20 sensors built in high-end smartphones

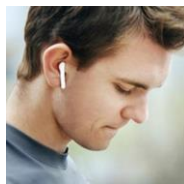


# 穿戴式裝置： 顯示器IC + 光學感測器 + MEMS + 觸控IC

## True wireless stereo (TWS) earbuds

Accelerometers → click detection 敲擊偵測

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



### 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



Gesture control



On/off control



Proximity detection (ELA)



Ambient dimming control (Smart speaker)



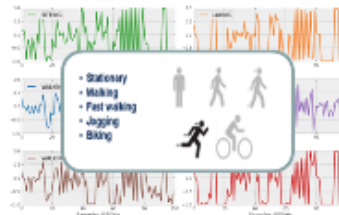
## Smart watches & fitness trackers

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





# 支持 AIoT 相關解決方案





**AIoT**

**AMADA Mazak Makita HITACHI Inspire the Next Continental's TOYOTA Ferrari Mercedes-Benz BMW HYUNDAI Volkswagen MITSUBISHI VOLVO SKODA BHTC YAMAHA DENSO ALPSALPINE AVAYA brother LEXMARK FUJI XEROX Gigaset KYOCERA Canon hp LEGO GARMIN GoPro 小天才 TECNO mobile LANDI 联想 ASUS NOKIA HUAWEI Jio Verifone Raritan. Itron 三星电气 威视集团 mi**

**BOSCH Panasonic cms electronics SIEMENS TOKYO ELECTRON MITSUBISHI ELECTRIC NISSEI PHILIPS KEYSIGHT TECHNOLOGIES OMRON EPSON BRAUN Schneider Electric Honeywell CITIZEN SAMSUNG dyson SONY Midea amazon LG LG Electrolux NEC TOTO Google**

# 產品策略

## 多樣化 (Diversification)

提供完整產品綫, 一站式採購服務  
One-stop shopping

分散應用, 分散市場, 降低風險  
Risk reduction

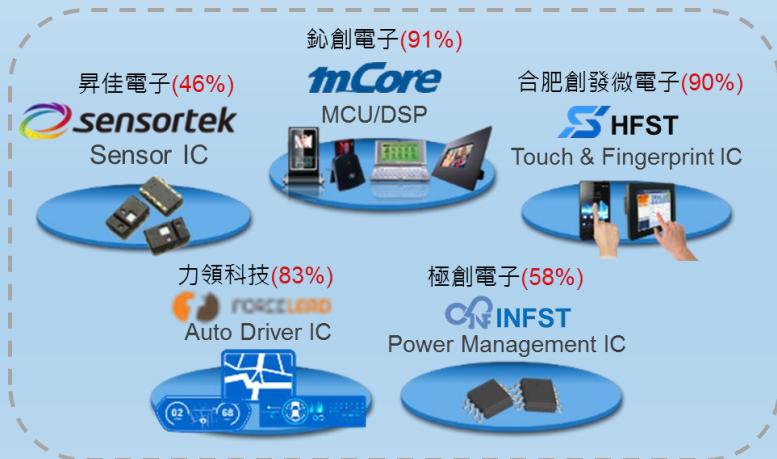
高成長+高毛利之產品組合  
Balance GM & sales growth

## 差異化 (Differentiation)

持續創造俱市場競爭力產品  
Make existing products better

持續擴展市場滲透率  
Market share gains

持續孵化新產品  
Incubated new products





# We'd love to hear from you!

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*Lighting up your life.*

**Sitronix**