



*Compound Semiconductor Solutions  
from RF to Lightwave*

**穩懋半導體**

**20**<sup>📶</sup>  
**YEARS**  
of  
III-V INNOVATION

# 穩懋半導體公司簡介

2020年2-4月



# 免責聲明

- 本資料可能包含對於未來展望的表述。該類表述是基於對現況的預期，但同時受限於已知或未知風險或不確定性的影響。因此實際結果將可能明顯不同於表述內容。
- 除法令要求外，公司並無義務因應新資訊的產生或未來事件的發生主動更新對未來展望的表述。

- 產業概況
- 技術藍圖
- 營運策略
- 營運結果與展望
- Q&A

# 產業概況

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20<sup>📶</sup>  
YEARS  
of  
III-V INNOVATION



2019年營收成長>20%，續創新高



非手持式產品營收年成長率>50%



成功開發並量產5G與3D感測之技術需求

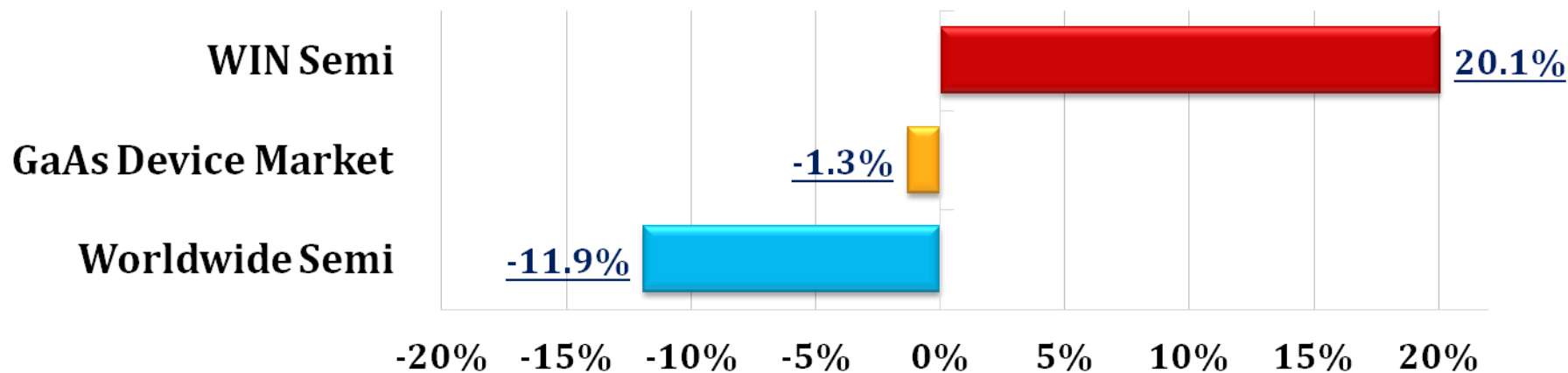


在S&P Global 與 RobecoSAM 出版的2020年永續年鑑(The Sustainability Yearbook 2020)中，獲選為Industry Mover；整體永續表現名列全球半導體及半導體設備產業的前10名

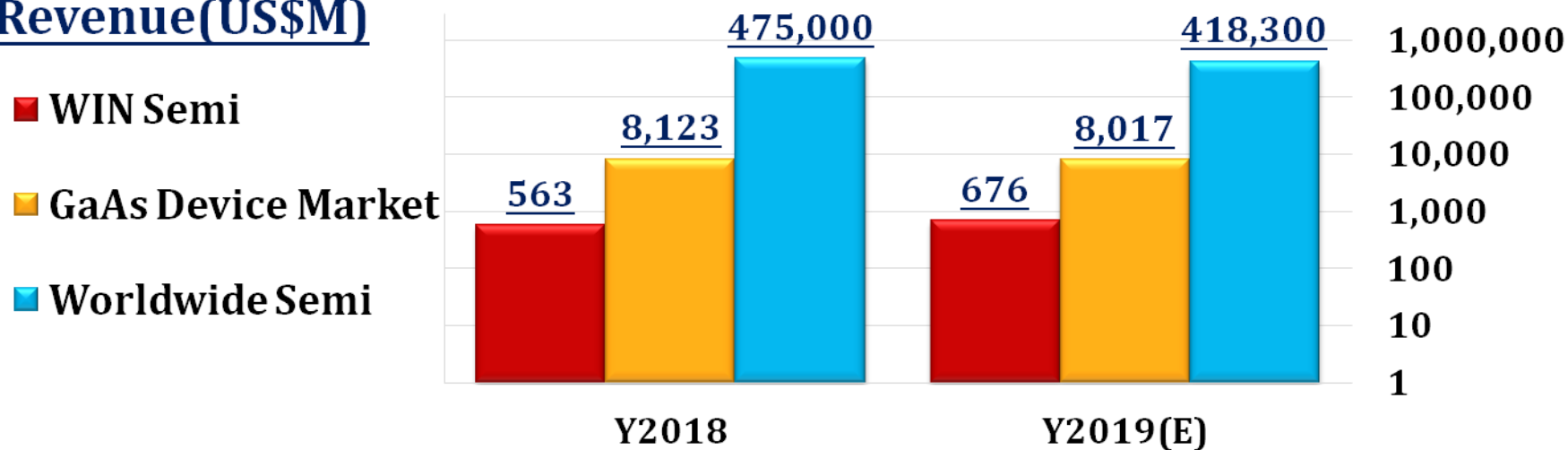


# 2019半導體產業營收成長趨勢

## Y2019 Revenue Growth Rate



## Revenue(US\$M)



Source : (1) Worldwide Semiconductors Revenue, Gartner, Jan. 2020  
 (2) GaAs Market Estimation, Strategy Analytics, 2019

**5G + Wi-Fi 6**



**Infrastructure**



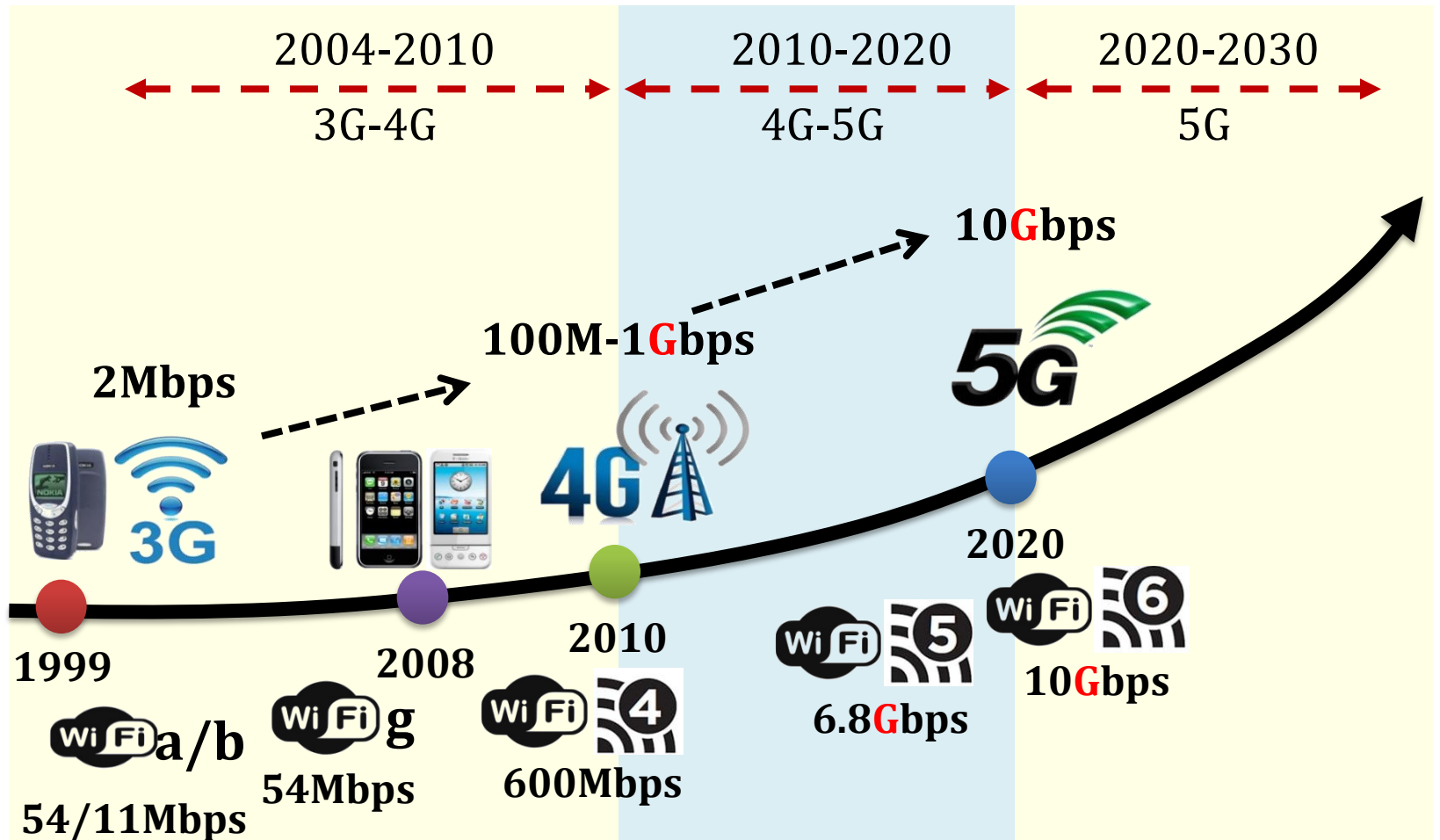
**Optical Devices**



# Performance(性能)

超高速

在**無線通訊**的必要性，與化合物半導體特性優勢相符





Y2019-20

商用建設期

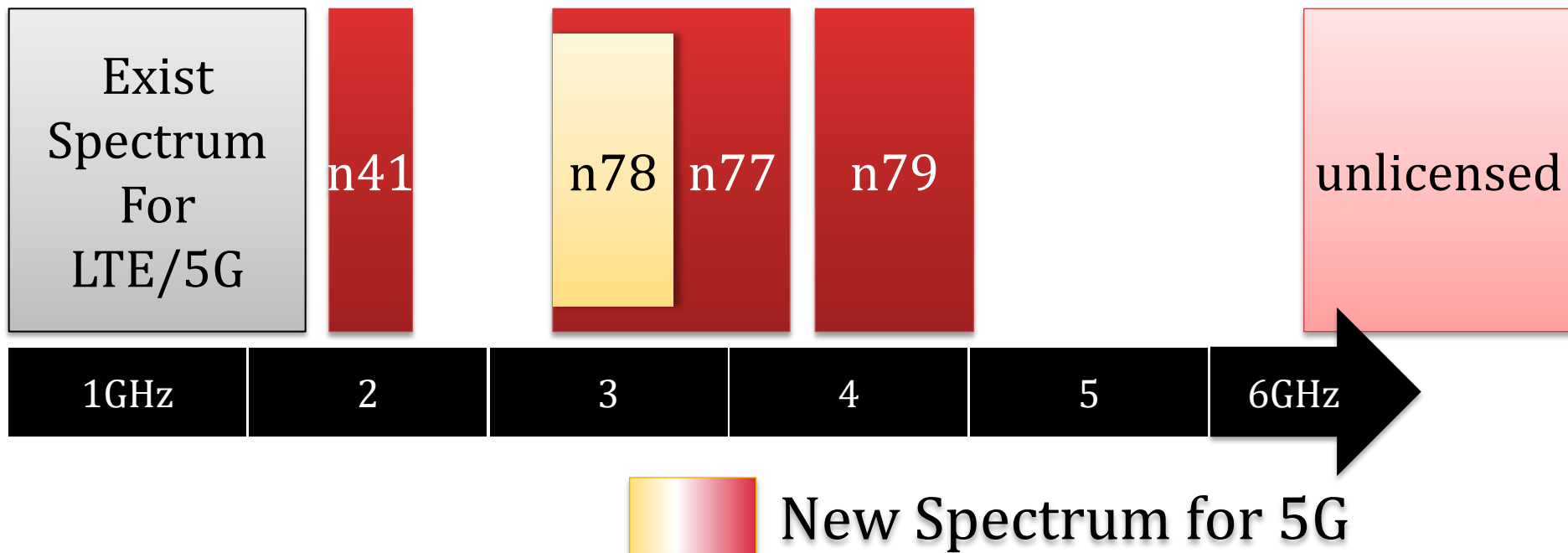
Y2021-25

需求爆發期

	Mobile Device	Infrastructure/CPE
Sub-6GHz	<ul style="list-style-type: none"> <li>• GaAs HBT</li> </ul>	<ul style="list-style-type: none"> <li>• GaN HEMT</li> <li>• GaAs pHEMT</li> </ul>
mmWave	<ul style="list-style-type: none"> <li>• Integrated compound semi technologies</li> </ul>	<ul style="list-style-type: none"> <li>• GaN HEMT</li> <li>• GaAs pHEMT</li> </ul>

- 5G sub-6GHz (<6GHz) spectrum bands for ubiquitous network coverage
- 5G mmWave (~30GHz) likely for fixed wireless access as a start followed by extreme mobile broadband in the longer term

# 5G Sub-6GHz 頻譜



(1) New frequency bands for 5G

(2) MIMO: n41, n77, n78, and n79

(3) Additional 5G PA (Reform existing 4G Frequency bands )



## Wi-Fi 6 產品應用擴展 以及 Wi-Fi 7 的發展

- Wi-Fi will be upgraded from 802.11ac to 802.11ax (Wi-Fi 6), from flagship to mid-range phones
  - Faster throughput
  - Higher network efficiency
  - Better in dense environments
- 802.11be (Wi-Fi 7)
  - Extreme high throughput
  - Extend to 6GHz frequency band

智慧  
手機

企業  
應用

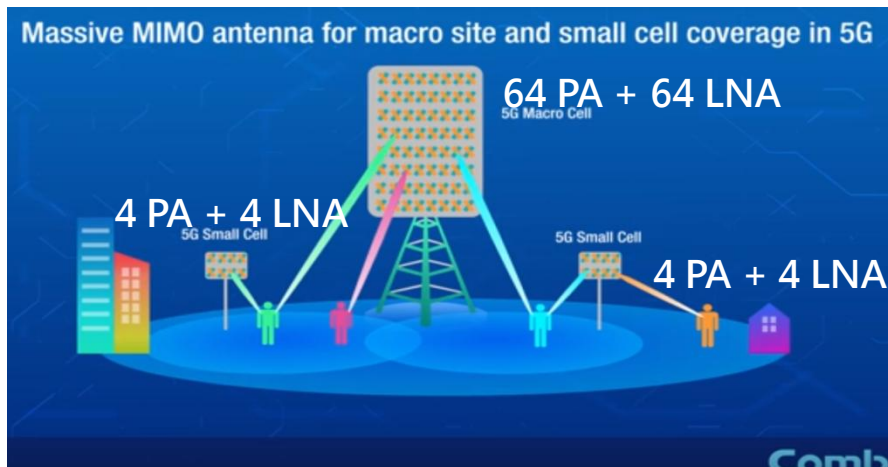
行動  
裝置

## ● RF Device Inside Macro & Small Cell Sector

- The high performance of compound semiconductors is the better choice for PA and LNA on 5G base-station.
- More than 100M transceivers in 2020.

## ● Satellite Communication Era is Coming

- More than 6,500 small satellites (<500kg) in orbit by 2027.
- Comms. application will be the key growth engine for satellite.

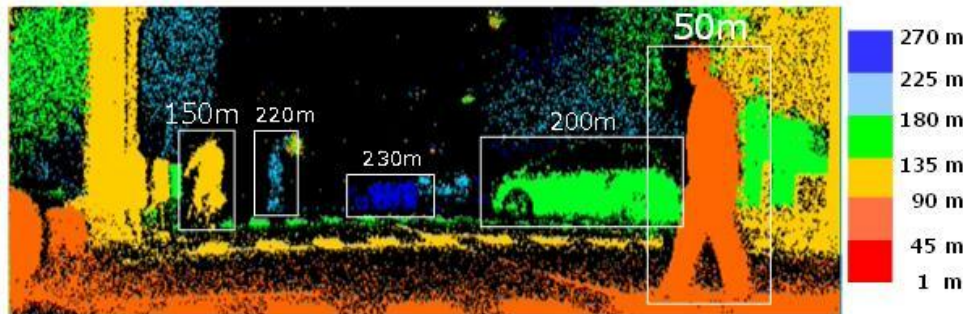


- Structure-Light demand keep very strong
- ToF for 3D sensing applications will keep growth
  - Production was started since 2H2019
  - Multiple customers use ToF for both front and world facing applications

## World Facing AR



## Autonomous



## Gesture Recognition





- 光電元件

- Data center interconnect, or metro/long-haul coherent transmission
- Proximity/Light sensor

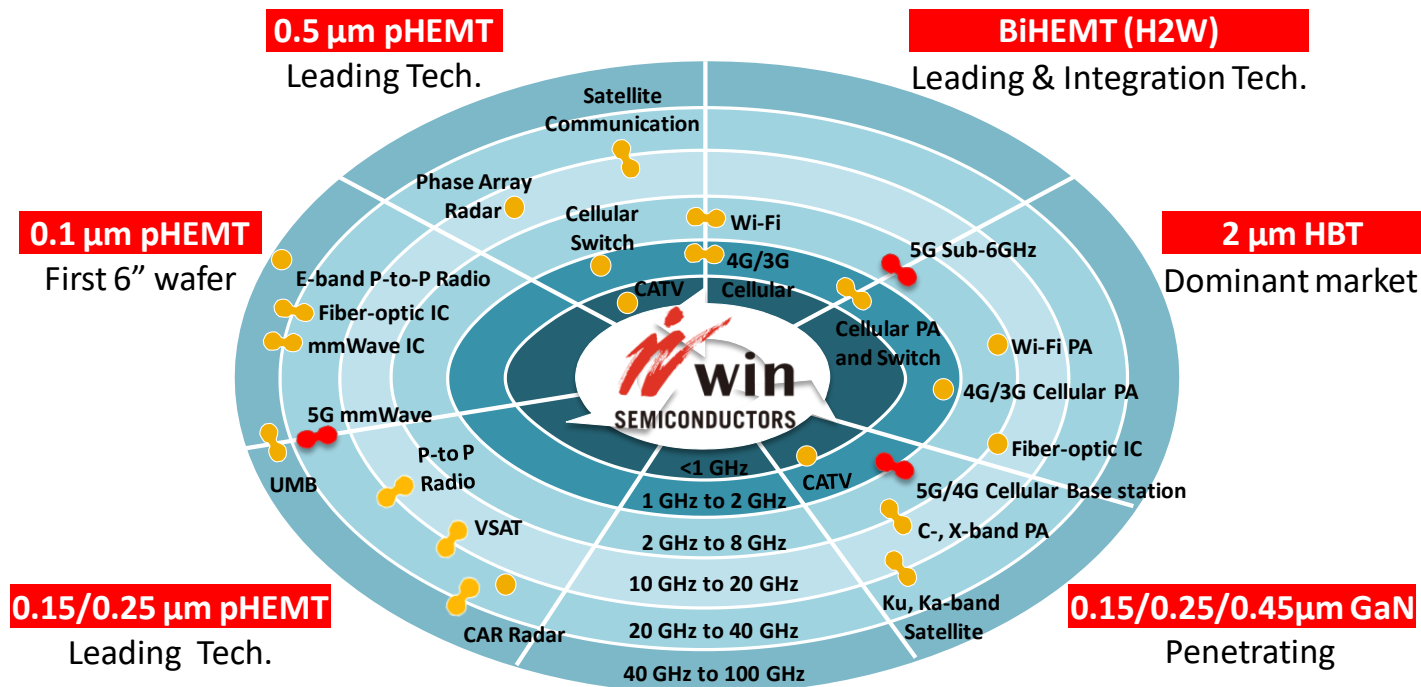


- **More and more customers engagement and will enter production stage soon**

# 技術藍圖

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The most comprehensive technology portfolio in industry enables customers to develop optimized products for a wide range of applications



- Dominant market share for high-performance HBT used in LTE PAs
- Leading BiHEMT technology for advanced integrated FEM
- First and only foundry worldwide to commercially develop 0.1μm pHEMT on 6" GaAs wafer

- Industry leading 0.15–0.25μm pHEMT technology
- Supports broad range of products such as PAs (from 50MHz–100GHz), switches, and fiberoptic IC
- Developing GaN for high power devices (4/5G base station)



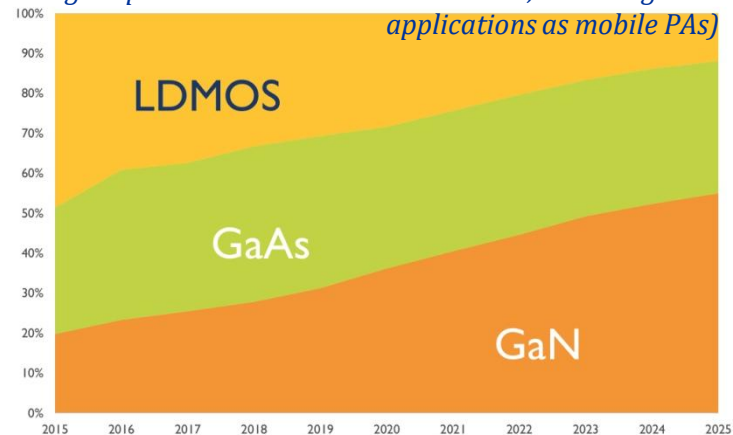
# 4/5G基礎建設 – 穩懋運用實例

## Ultra high frequency semiconductor technology provider!

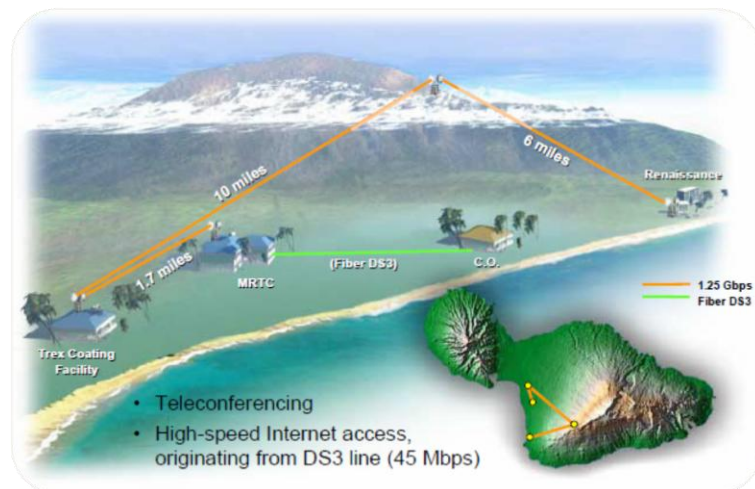
- Wireless infrastructure
- Satellite communications
- Fiberoptic communication
- ADAS

## RF power device market, in value – breakdown by technology

(Only considering RF power semiconductors above 3W, excluding such applications as mobile PAs)



Source: Yole Développement



Invest in capacity to capture demand growth and improve margins through product remix

**Scale & Remix**

**Technology Leadership**

Invest in technologies to maintain competitive edge and sustain leadership

Leverage on technology and manufacture expertise to lift efficiency and drive cost down

**Cost & Efficiency**

**Customer Diversification**

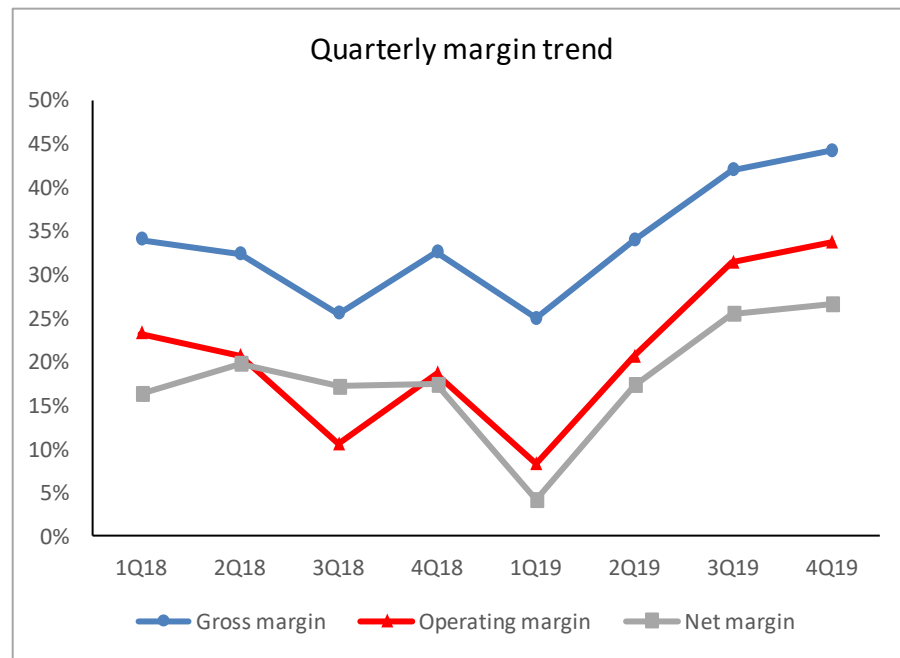
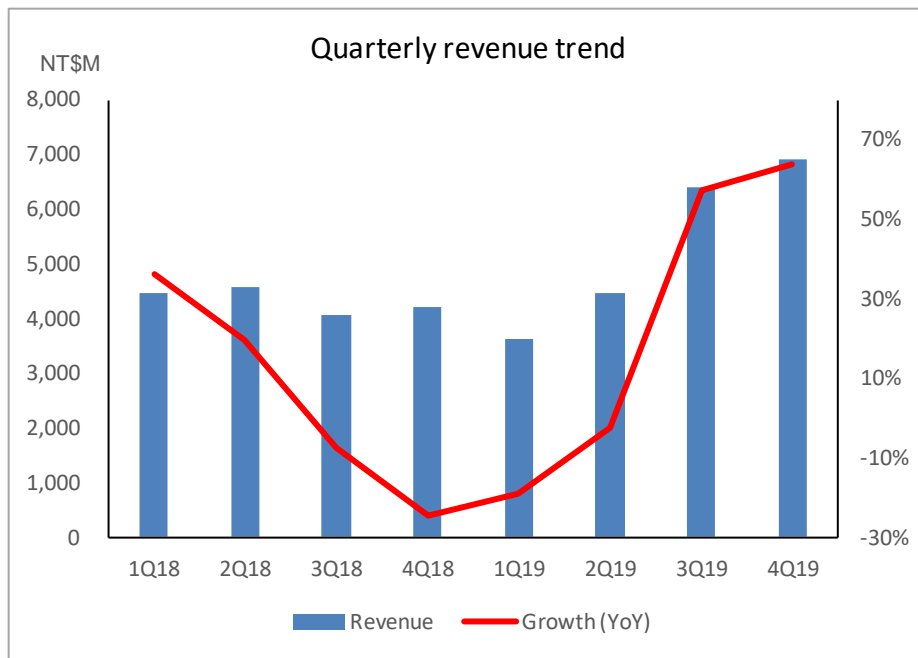
Grow and acquire new customers in existing and new markets to diversify customer base

# 營運結果與展望

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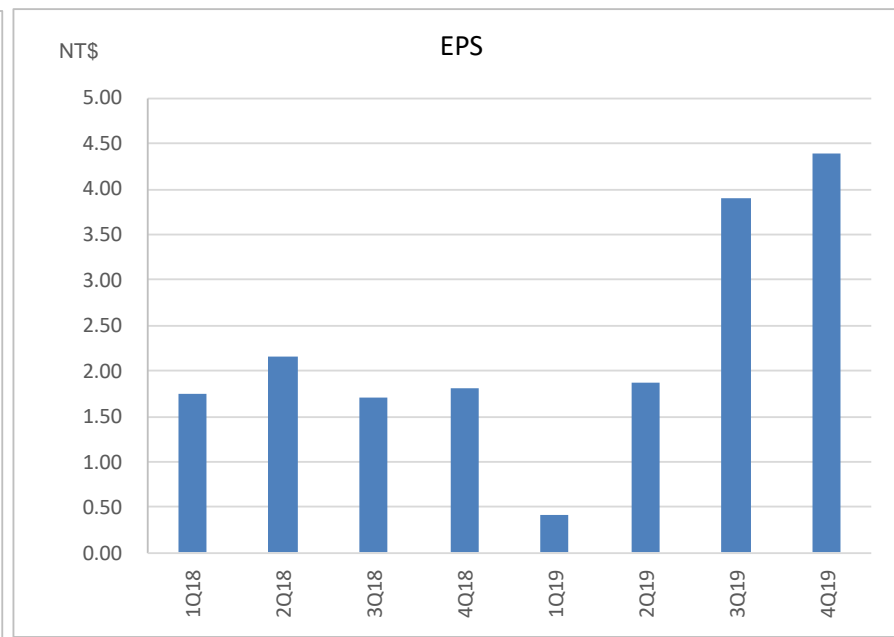
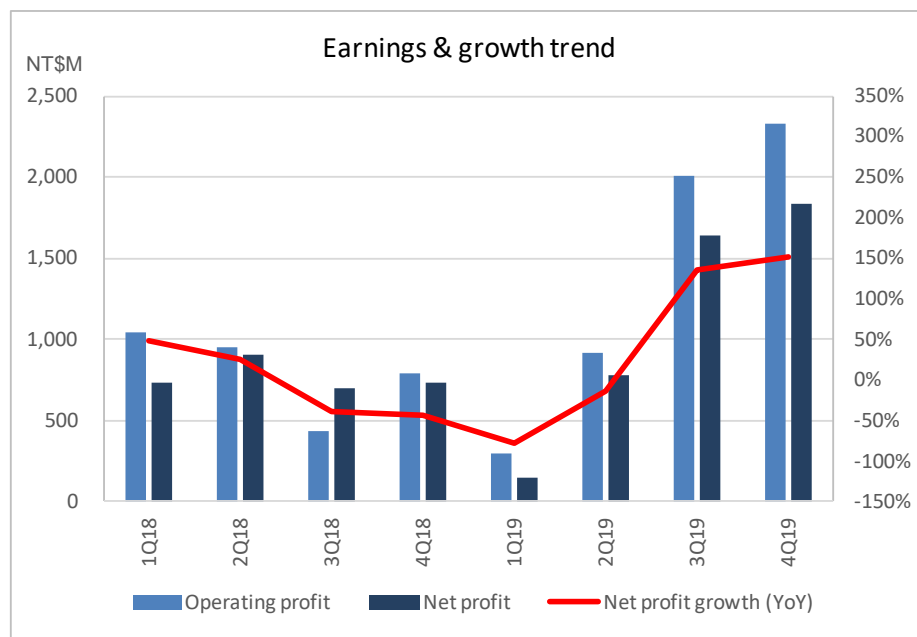
# 營收及毛利趨勢

- 第四季營收創下歷史新高為新台幣69.04億元，較前一季增加8%，較去年同期增加64%。
- 歸功於產能利用率提升，第四季營業毛利率及營業淨利率均為單季歷史新高；營業毛利率較前一季上升2.1個百分點來到44.2%，營業淨利率較前一季上升2.3個百分點來到33.7%。



Source: company.

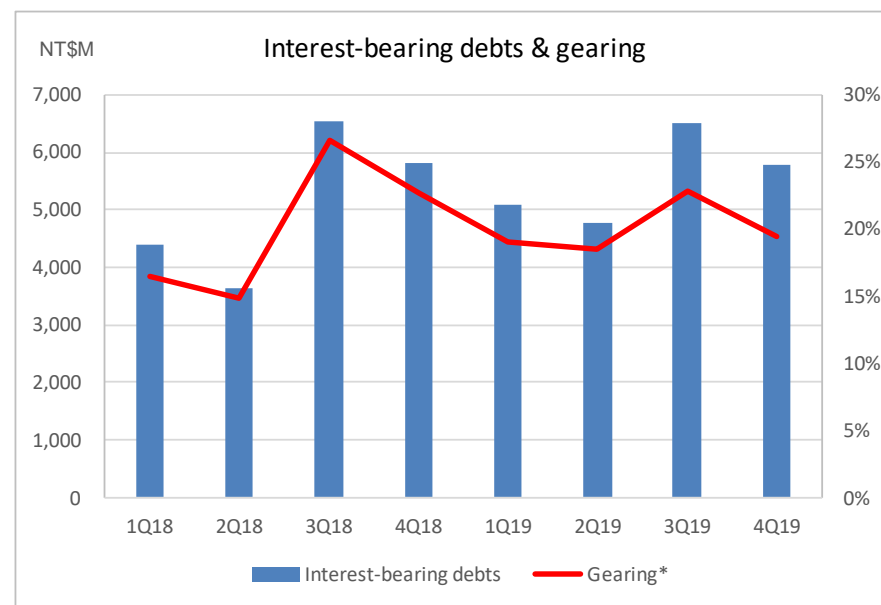
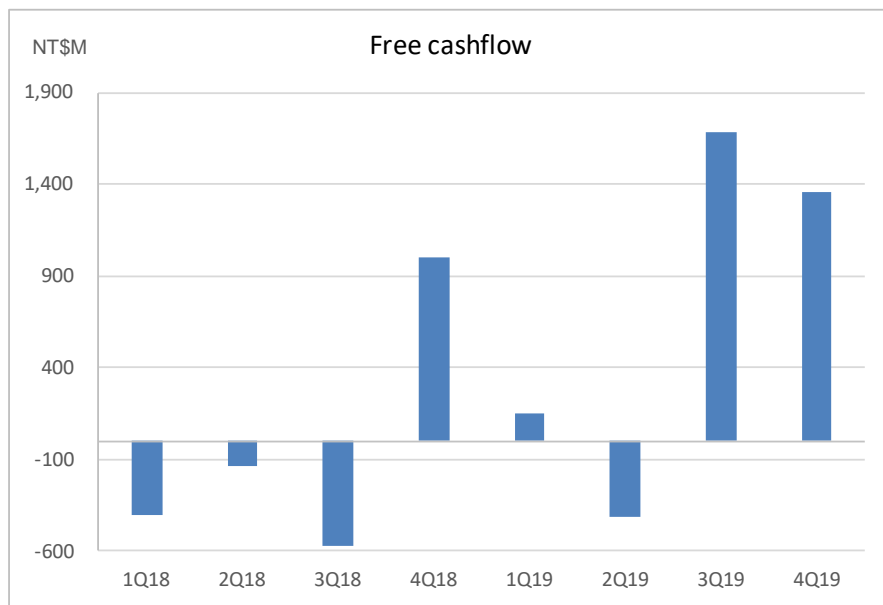
- 第四季淨利與EPS同創單季歷史新高，淨利為NT\$18.4億元，較前一季增加12%，較去年同期增加151%；第四季EPS為NT\$4.4元，前一季EPS為NT\$3.9元。



Source: company.

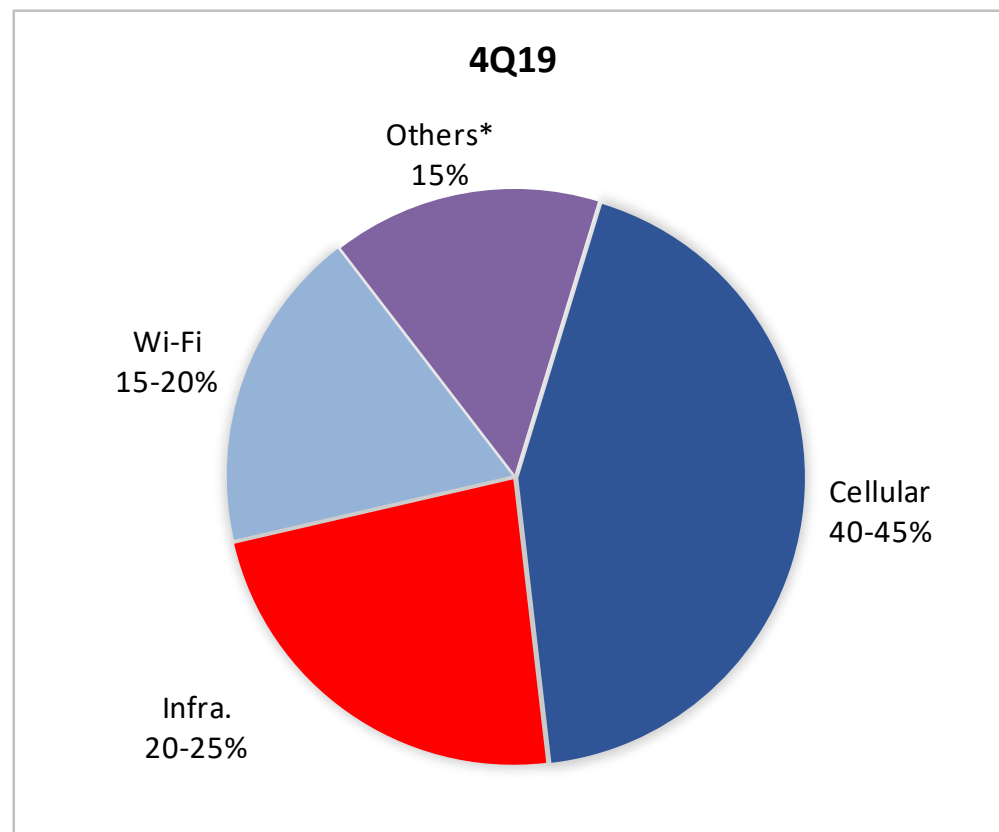
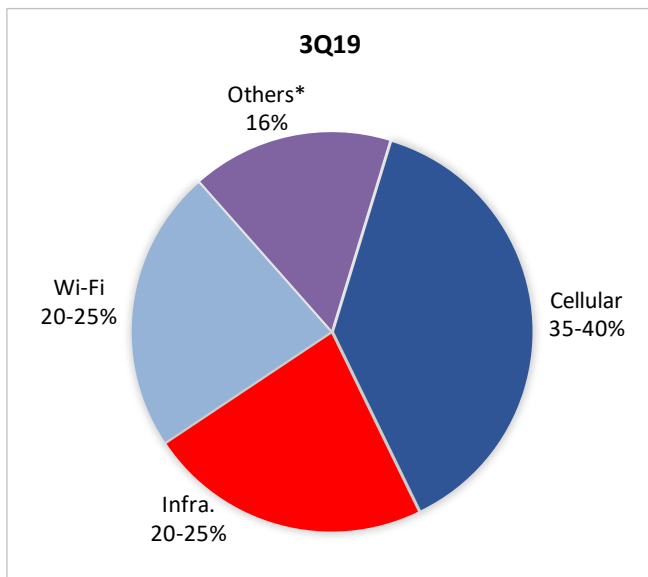
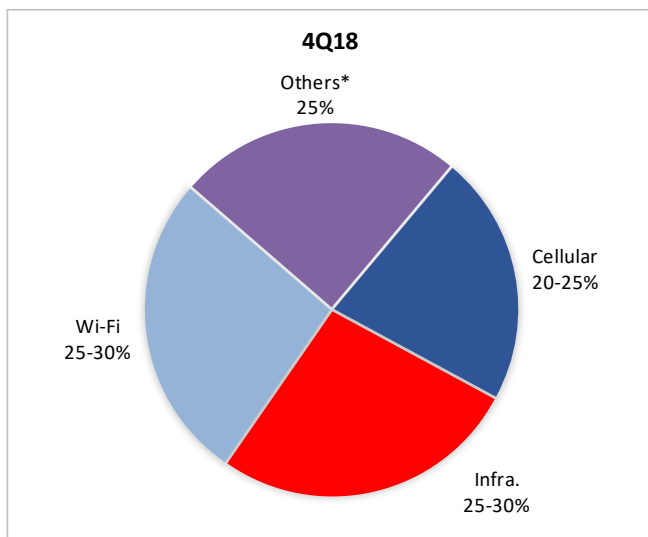
# 自由現金流量及負債趨勢

- 第四季雖資本支出較前一季增加，但自由現金流量仍然充沛。
- 第四季計息負債及負債比率均較前一季降低，財務結構穩健。



\* Gearing = interest-bearing debts / equity  
Source: company.

# 產品組合



\* Others: 未歸屬於以上主要產品別之營收，以及因應IFRS要求而併入集團之合併營收

Source: company.

- 2020年第一季營收預計將較前一季下滑low-teens百分比。
- 預計2020年第一季毛利率約為low-forties的水準。



# 附件 – 財務狀況

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# 合併綜合損益表 - 第四季

(新台幣 百萬元)	4Q'18	3Q'19	4Q'19 (自結數)	QoQ	YoY
<b>營業收入</b>	<b>4,214</b>	<b>6,404</b>	<b>6,904</b>	<b>+8%</b>	<b>+64%</b>
營業毛利	1,374	2,693	3,052	+13%	+122%
營業毛利率(%)	32.6%	42.1%	44.2%		
營業費用	(585)	(681)	(723)	+6%	+24%
營業費用率(%)	-14%	-11%	-10%		
<b>營業淨利</b>	<b>789</b>	<b>2,012</b>	<b>2,329</b>	<b>+16%</b>	<b>+195%</b>
營業淨利率(%)	18.7%	31.4%	33.7%		
營業外收支淨額	72	(29)	(110)		
稅前淨利	861	1,983	2,219	+12%	+158%
所得稅費用	(128)	(346)	(379)		
<b>本期淨利</b>	<b>733</b>	<b>1,637</b>	<b>1,840</b>	<b>+12%</b>	<b>+151%</b>
淨利率(%)	17.4%	25.6%	26.6%		
<b>每股純益(元)</b>	<b>1.80</b>	<b>3.90</b>	<b>4.40</b>	<b>+13%</b>	<b>+144%</b>
其他綜合損益(稅後淨額)	(226)	1,031	(535)		
<b>綜合損益總額</b>	<b>507</b>	<b>2,668</b>	<b>1,304</b>	<b>-51%</b>	<b>+157%</b>
年化ROE(%)	12%	24%	25%		
約當產能利用率 (%)	55%	95%	100%		
折舊費用	839	809	871		
資本支出	838	1,116	1,701		

# 合併綜合損益表 - 年度

(新台幣 百萬元)	2018Y	2019Y (自結數)	YoY
<b>營業收入</b>	<b>17,311</b>	<b>21,378</b>	<b>+23%</b>
營業毛利	5,415	8,161	+51%
營業毛利率(%)	31.3%	38.2%	
營業費用	(2,210)	(2,602)	+18%
營業費用率(%)	-13%	-12%	
<b>營業淨利</b>	<b>3,205</b>	<b>5,559</b>	<b>+73%</b>
營業淨利率(%)	18.5%	26.0%	
營業外收支淨額	529	(165)	
稅前淨利	3,735	5,393	+44%
所得稅費用	(669)	(993)	
<b>本期淨利</b>	<b>3,066</b>	<b>4,401</b>	<b>+44%</b>
淨利率(%)	17.7%	20.6%	
<b>每股純益(元)</b>	<b>7.39</b>	<b>10.59</b>	<b>+43%</b>
其他綜合損益(稅後淨額)	(366)	1,970	
<b>綜合損益總額</b>	<b>2,700</b>	<b>6,371</b>	<b>+136%</b>
年化ROE(%)	12%	16%	
約當產能利用率 (%)	70%	80%	
折舊費用	3,159	3,348	
資本支出	5,592	5,306	

# 營業外收支

(新台幣 百萬元)	4Q'18	4Q'19 (自結數)	2018Y	2019Y (自結數)
外幣兌換損益	21	(138)	129	(75)
處分不動產、廠房及設備損益	2	(87) (註)	2	(376) (註)
處分投資損益	11	208	286	256
透過損益按公允價值衡量之金融資產及負債淨損益	56	(128)	(32)	(60)
採用權益法認列之關聯企業及合資損失之份額	(61)	(6)	(110)	(201)
其他	42	40	254	291
<b>總計</b>	<b>72</b>	<b>(110)</b>	<b>529</b>	<b>(165)</b>

(註) 主要為上半年陸續接收大客戶Avago全數HBT生產線設備，於下半年處分部份不適用機台之損失。

# 合併資產負債表

(新台幣 百萬元) 重要科目	2018/12/31		2019/9/30		2019/12/31 (自結數)	
	\$	%	\$	%	\$	%
現金及約當現金	5,462	15%	4,993	12%	5,926	14%
透過損益按公允價值衡量之金融資產-流動	103	0.3%	720	1.8%	507	1.2%
應收票據及帳款淨額	1,422	4%	2,220	5%	2,407	6%
存貨	3,907	11%	4,364	11%	4,389	10%
長期投資	3,641	10%	6,191	15%	5,655	13%
不動產、廠房及設備	19,633	55%	20,432	50%	21,405	51%
<b>資產總計</b>	<b>35,460</b>	<b>100%</b>	<b>40,580</b>	<b>100%</b>	<b>42,126</b>	<b>100%</b>
流動負債	3,828		4,971		5,976	
長期借款	5,803		6,521		5,788	
<b>負債總額</b>	<b>9,855</b>	<b>28%</b>	<b>12,024</b>	<b>30%</b>	<b>12,287</b>	<b>29%</b>
普通股股本	4,238		4,241		4,241	
歸屬於母公司業主之權益	25,380		28,427		29,657	
<b>權益總計</b>	<b>25,604</b>	<b>72%</b>	<b>28,557</b>	<b>70%</b>	<b>29,840</b>	<b>71%</b>
每股淨值(元) <sup>1</sup>	59.88		67.04		69.94	
<b>重要財務指標</b>						
流動比率	296%		253%		228%	
負債比率	28%		30%		29%	

<sup>1</sup> 每股淨值=歸屬於母公司業主權益/普通股股數

# Q & A

For more information regarding WIN  
[www.winfoundry.com](http://www.winfoundry.com)

For all inquiries, suggestions, and comments  
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