



*Compound Semiconductor Solutions
from RF to Lightwave*

穩懋半導體

穩懋半導體公司簡介

2024年3-4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
- 穩懋提供的製程技術
- 營運結果與展望
- Q&A

產業概況

The Megatrend



Ubiquitous AI Access



3D Holographic Meeting & UI



Teleoperation Surgery & Vehicle



Autonomous Vehicle

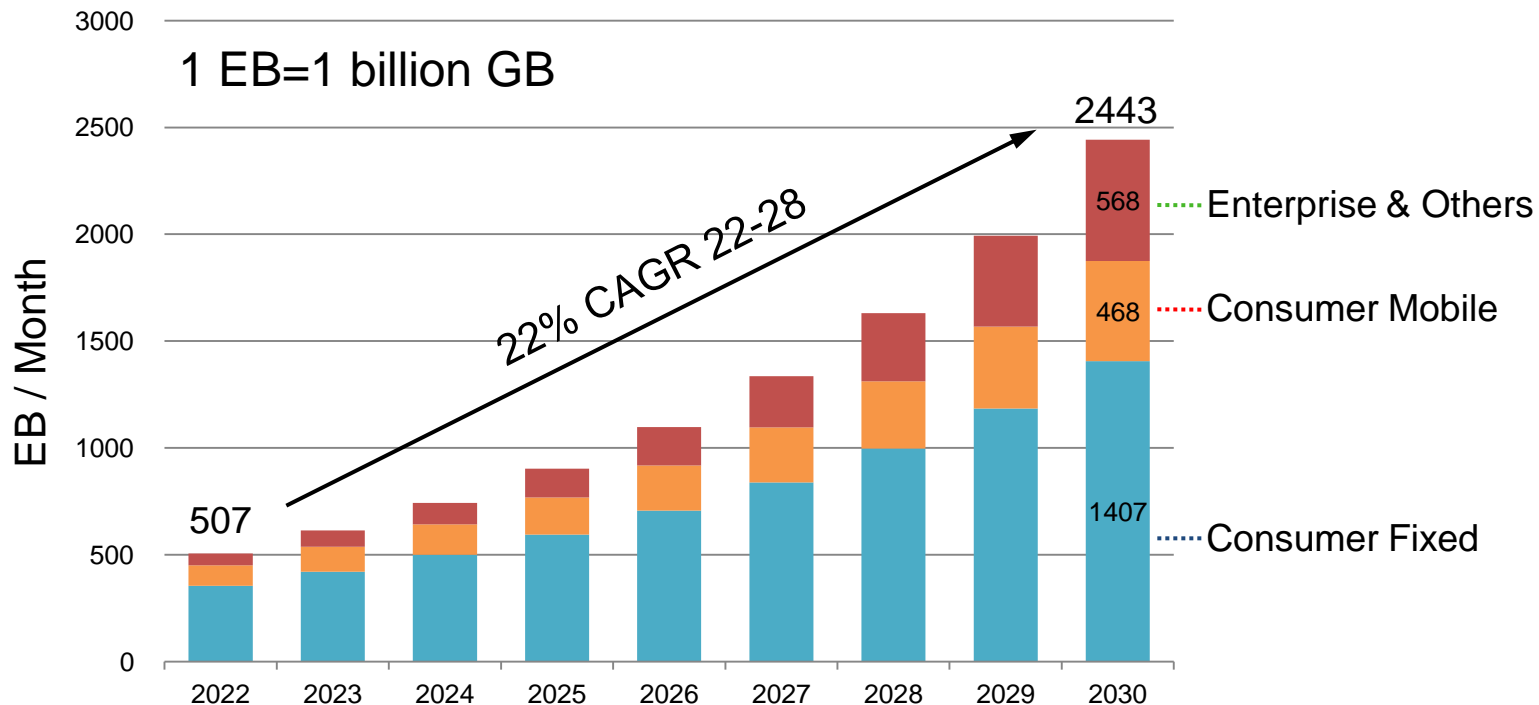


True Smart City
>10X Devices
Connected/area

快速增加的全球數據流量

To increase data transmission capacity:

1. Increase number of devices; and
2. Improve performance of devices (spectrum efficiency)



NOKIA

Source: Nokia.

“Ubiquitous AI Access” 關鍵要素

WIN's cutting-edge III-V foundry technologies
to provide critical processes toward the AIoT megatrend.

Wi-Fi 7
Mobile & Router



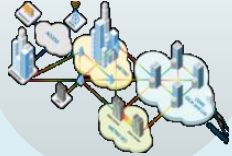
B5G
Mobile & BST



Satellite Comm.
LEO&GEO



Core/Metro Telecom
Network



AR / VR / XR



3D Sensing



Biometric Sensors



Automotive
LiDAR



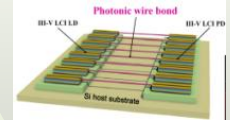
Industrial Robot



Hyper Scale
DC MMF Optics
800G/400G



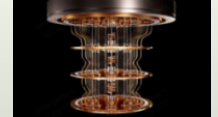
Inter-Chips
Optical
Interconnect



Mid and Long-Reach
SMF Optics
for AI Server



Quantum
Computing



Ultra-high Speed
Data Transmission



Smart Sensing



Mass Data
Computation & Storage

穩懋提供的製程技術

超高速數據傳輸

Driven by massive data generated by vast computing, storage, and sensing devices.

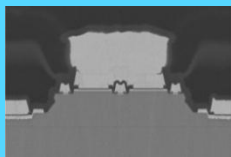


Wi-Fi 7

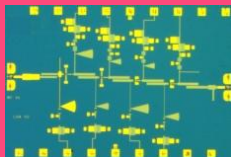
World-Leading

7th

Gen. HBT



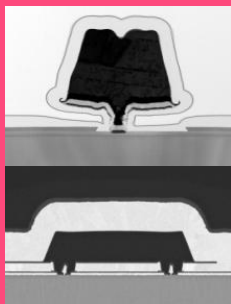
B5G/6G



World-Leading

mmWave

pHEMT

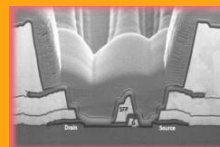


Satellite comm.

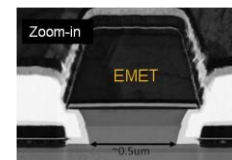


Telecom

World Class
RF
GaN HEMT
technology

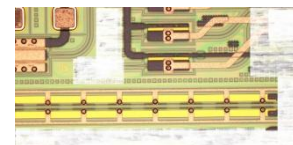
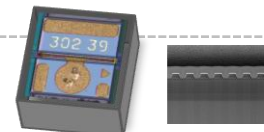


SAW & BAW
Filters



Reliable InP
HBT with
Cutoff Freq.
 $\geq 300\text{GHz}$

InP-based
PIC and
laser sources



智慧型感測

Driven by innovative applications toward a safer, environmental friendlier, and more immersive experience lifestyle for people.



AR / VR / XR



3D Sensing For Mobile devices



Biometric Sensors



Automotive LiDAR & In-Cabin



Industrial

SWIR/NIR VCSEL

Back-emitting VCSEL with Optics

On-VCSEL Optics Technology

Multi-junction High power VCSEL

Addressable VCSEL Array (6")

SWIR EEL

InP-based Photodetectors (APD & PIN)

大數據計算與儲存

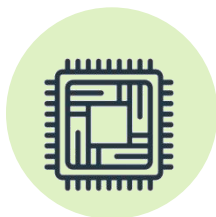
Driven by rapidly increased AI servers in data center and new computation technology.



**Hyper Scale
Data Center
MMF Optics 800G/400G**

100 Gbps/lane
VCSEL
On
6" wafer

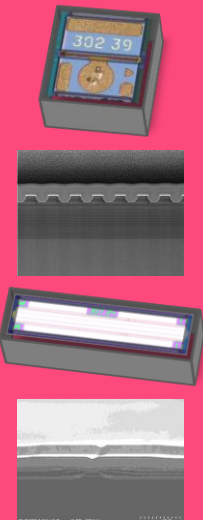
WIN pHEMT
LD/Modulator
Driver IC



**Inter-Chips
Optical Interconnect**



InP-based
BH DFB LD



InP-based
High-speed
Photodiodes
(APD&PIN)

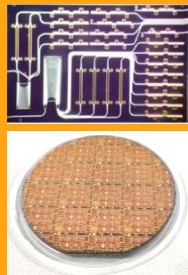


Source: Trumpf



**Mid and Long-
Reach
SMF Optics
for AI Servers**

InP-based
Photonic IC



Quantum Computing

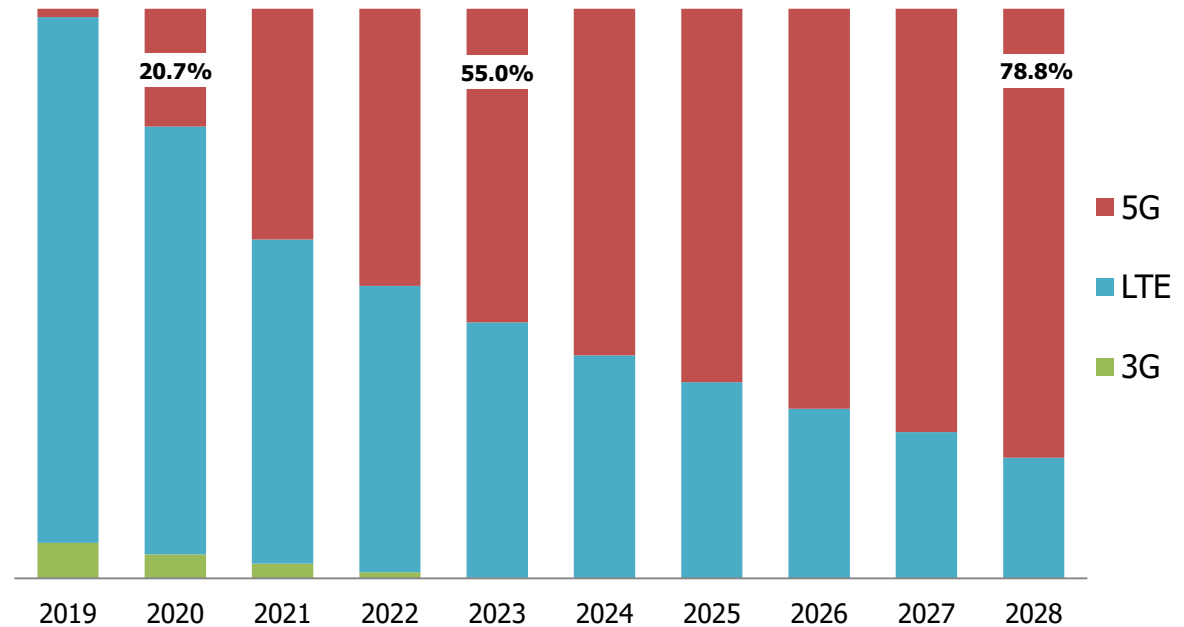
5G智慧型手機增加PA用量

- 5G smartphone shipments surpassed 4G in 2023.
- Higher PA content in 5G smartphones compared to 4G.

Smartphone Market Breakdown by Cellular Standard

PA volume in Smartphone

4G	4 ea
5G	6 ea
	7 ea (+N77)
	8 ea (+N77, N79)

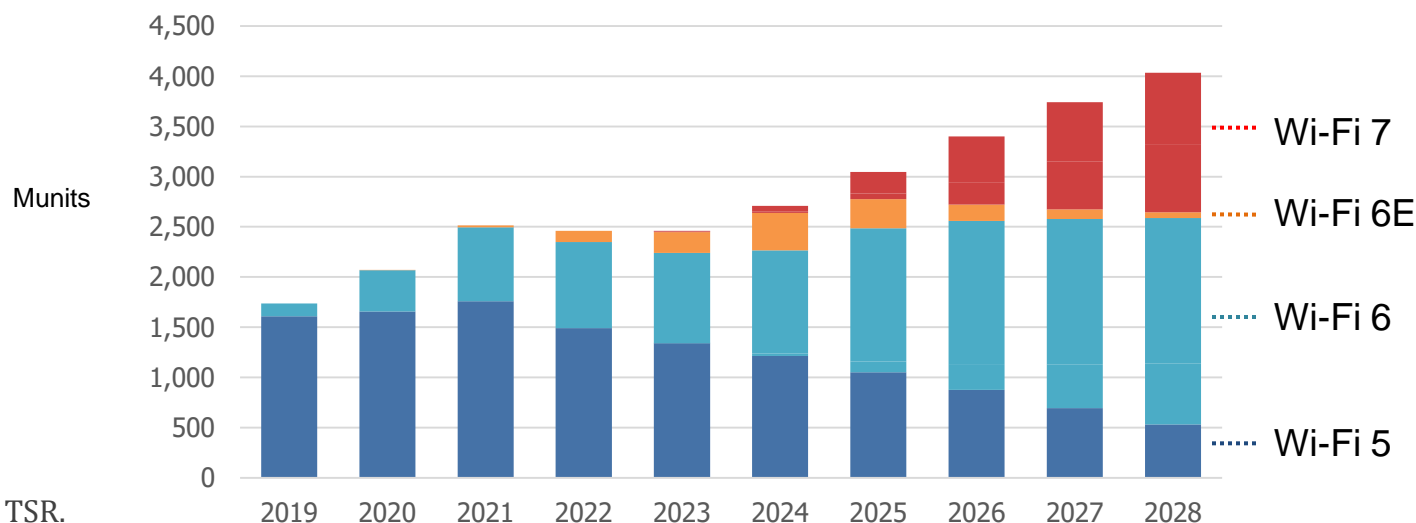


Source: TSR.

Wi-Fi 7使得GaAs PA用量增加

- Wi-Fi 7 data rate increased by spectrum, channel bandwidth and modulation.
- GaAs provides the best performance for high linearity, high frequency and broadband applications.
- External PA demand will grow with Wi-Fi 7.

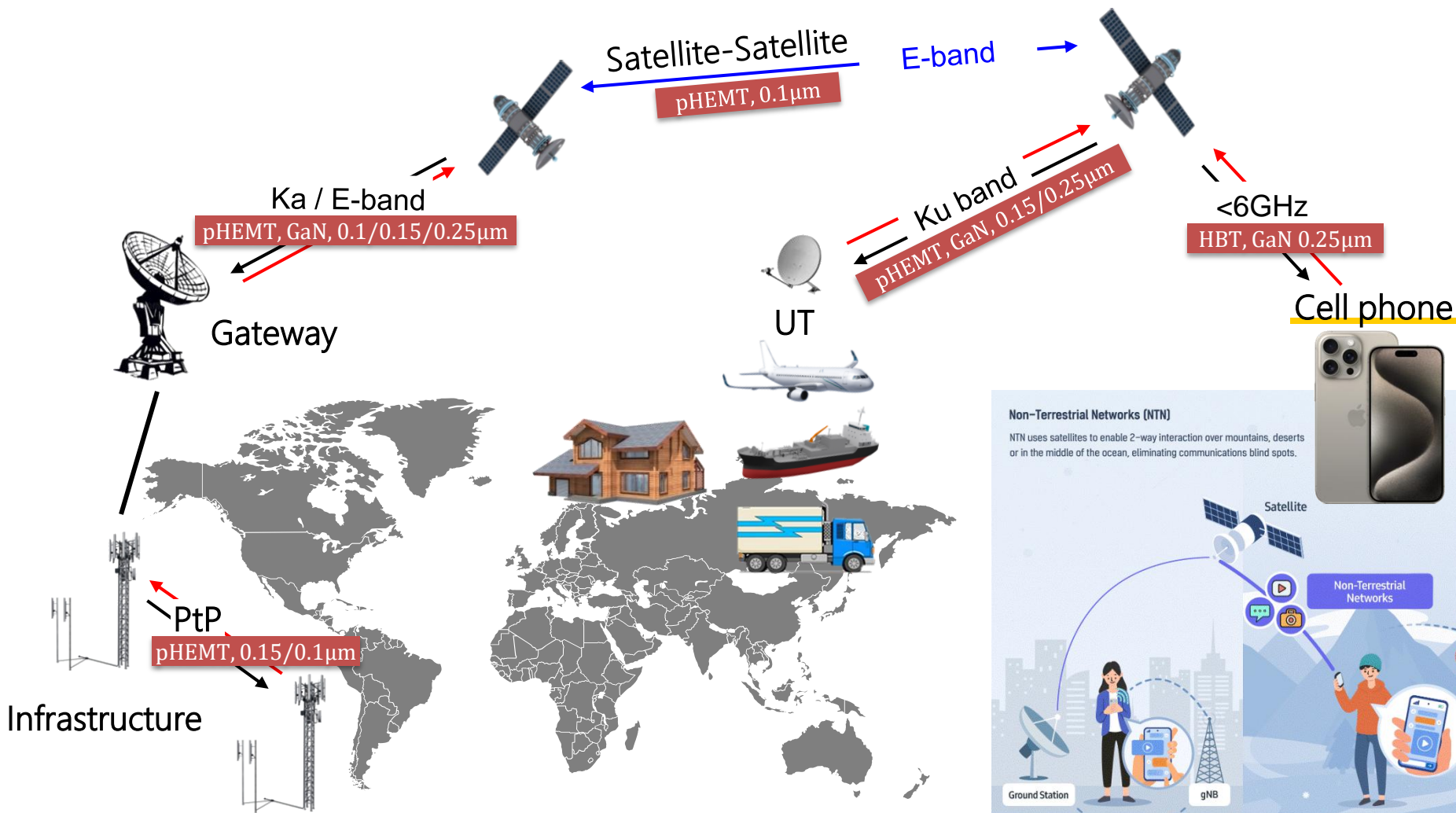
	Wi-Fi 6	Wi-Fi 6E	Wi-Fi 7
Bands	2.4GHz, 5GHz	2.4GHz, 5GHz, 6GHz	2.4GHz, 5GHz, 6GHz
Channel Size	20,40,80, 80+80,160MHz		Up to 320MHz
Modulation	1024-QAM		4096-QAM



Source: TSR.

衛星通訊實現無縫接軌

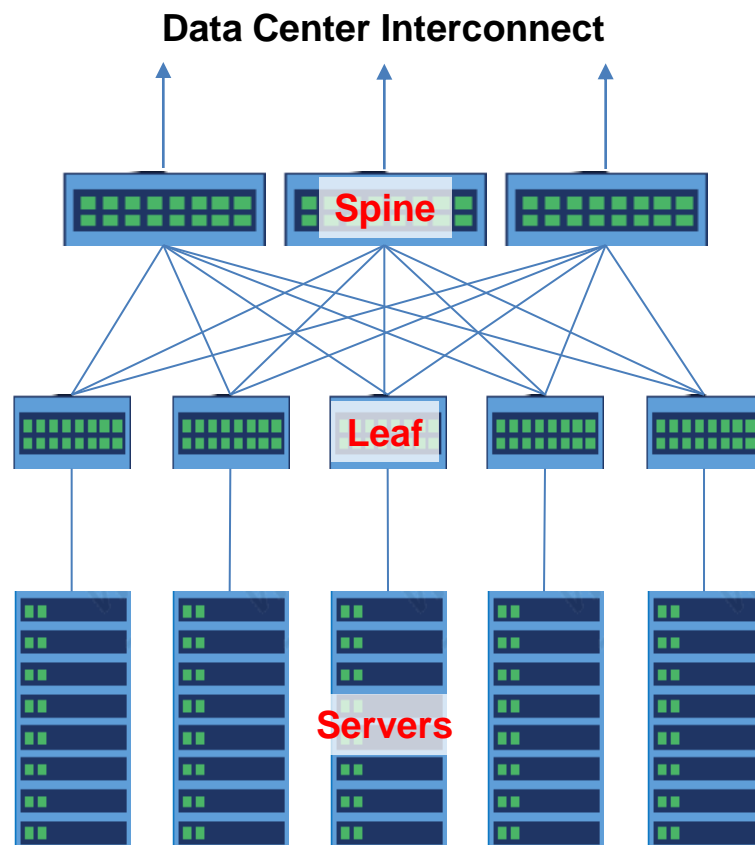
- LEO launch and NTN for direct to cell application deployment.



AI資料中心催化雷射&驅動IC的需求

- Driven by rapidly increased AI servers demand, The high speed and short range solution from VCSEL keep penetrating into DCI applications.

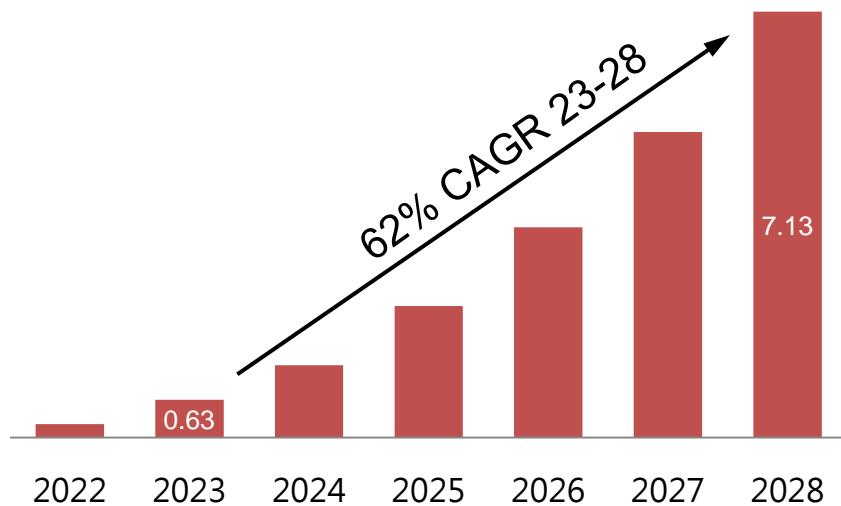
	Distance	Laser	At Present	Next Gen
Spine - Leaf	>2km	DFB/EML	400G LR/ER/ER	800G LR/ER/ER
Leaf - Server	<2km	DFB/EML	400G DR/FR	800G DR/FR
Server - Server	<100m	VCSEL	400G AOC/SR	800G AOC/SR



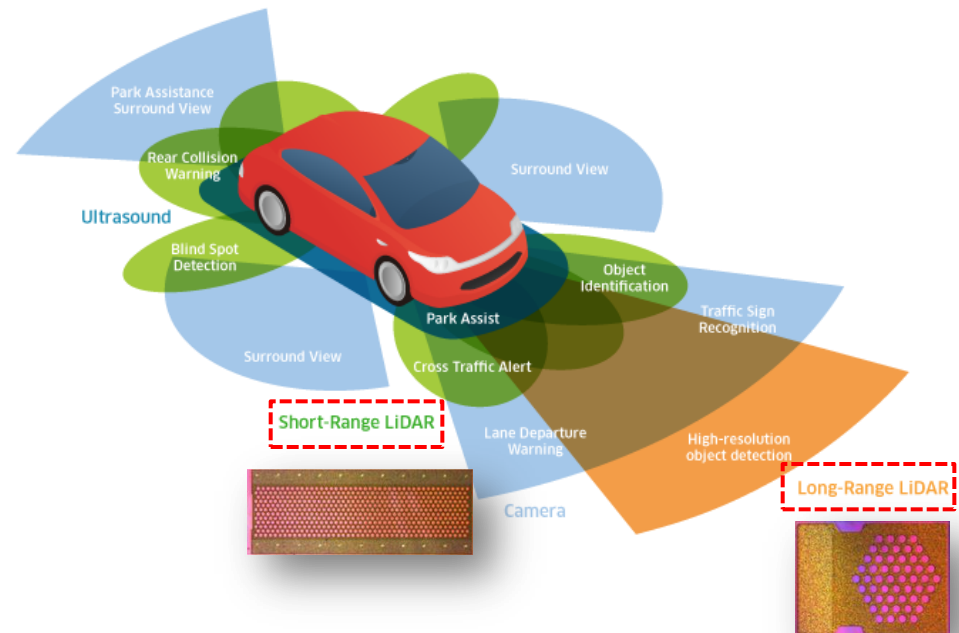
下一個汽車應用重要趨勢 - LiDAR 及 DMS/OMS

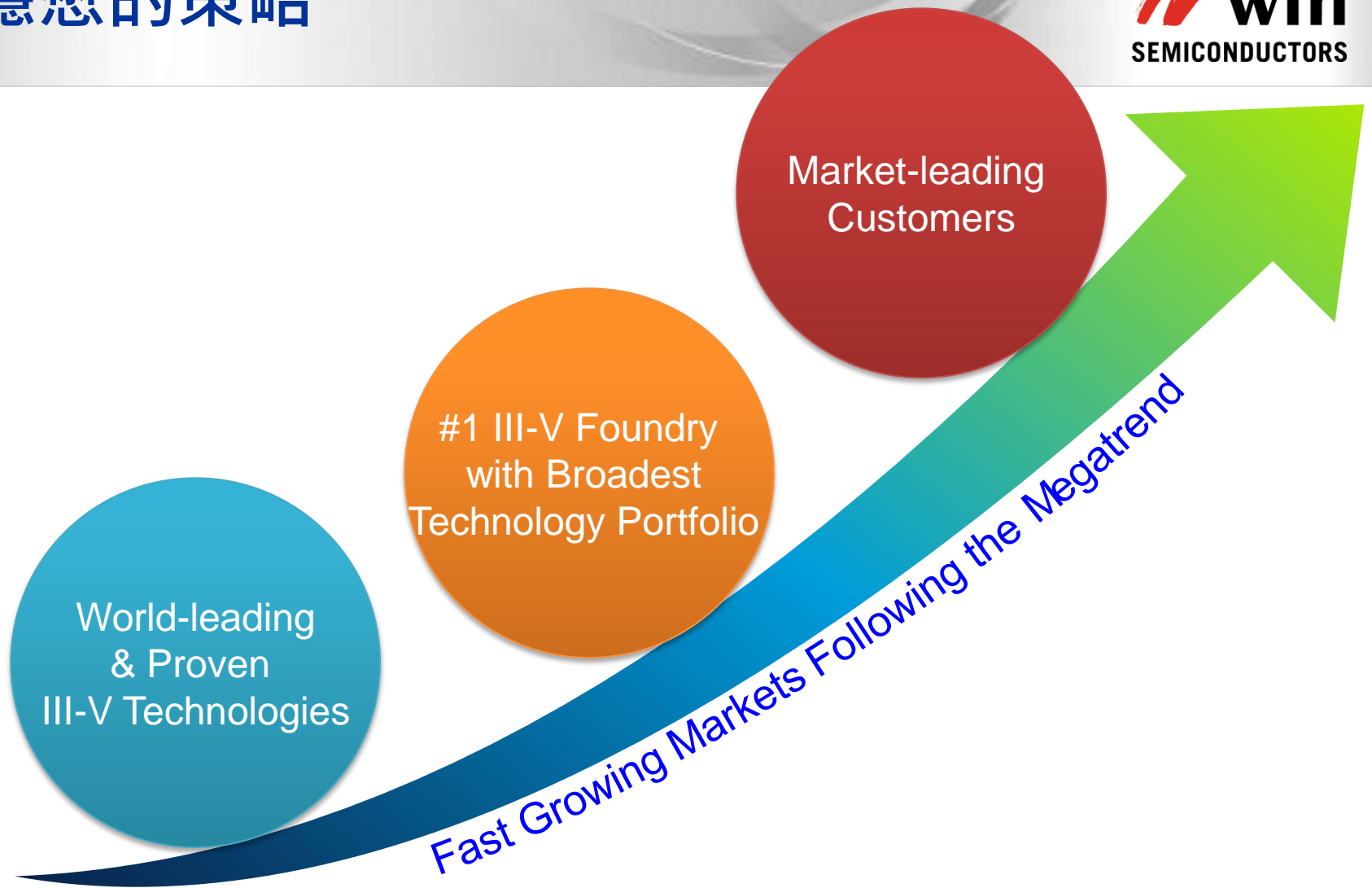
- Market report estimates a strong CAGR of 62% for automotive LiDAR application.
- Hybrid and pure solid-state LiDAR are becoming the mainstream technology. Semiconductor laser as the LiDAR light source will be beneficial from this technology trend.
- Both GaAs VCSEL and InP EEL are the strong contenders each with its own merits.

LiDAR Market by shipment in M units



Source: YOLE.





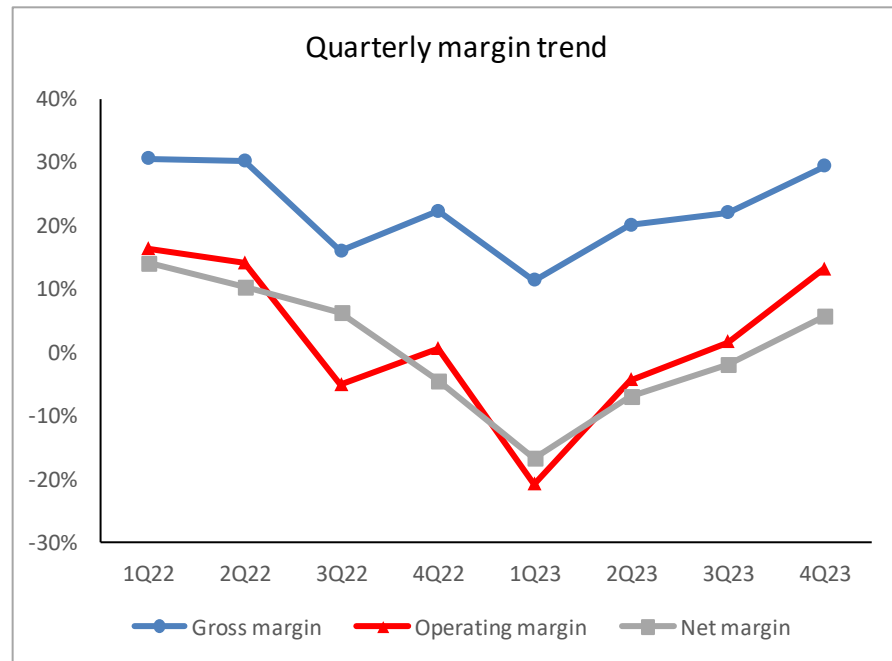
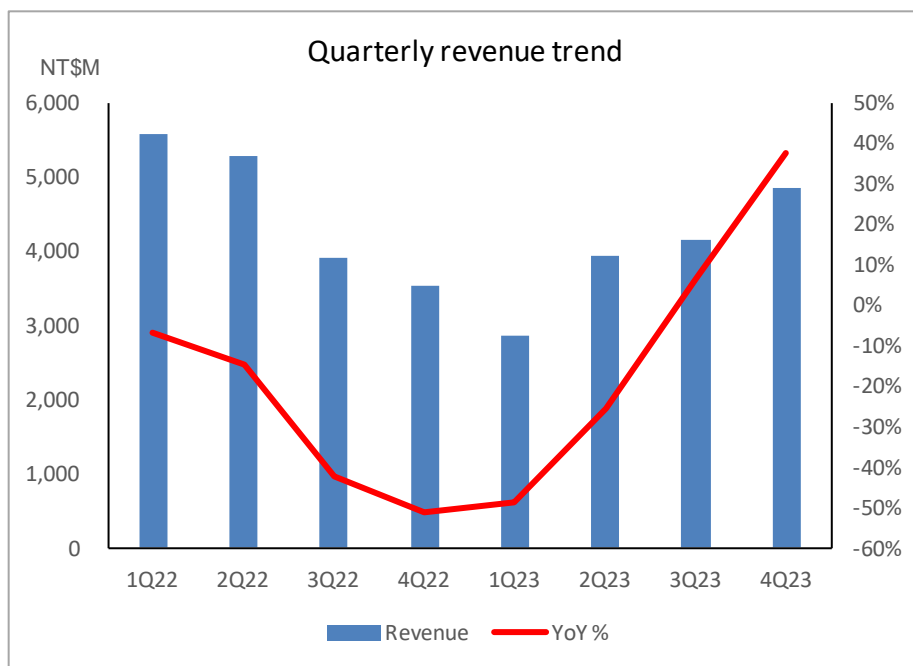
Serve market-leading customers with our most comprehensive world-leading and proven III-V manufacturing technologies in the fast growing markets along the megatrend.

- WIN, as the global leading III-V foundry company, provides critical process technologies to meet the AIoT megatrend.
- WIN possesses the broadest technology portfolio to serve major markets in wireless communication links, AI data center optical links, automotive LiDAR and broad range of 3D sensing emerging applications.
- Highlight growth momentum from 5G PA content increase, Wi-Fi 7 adoption, satellite communication links, AI datacenter O/E interface, and automotive LiDAR etc.
- WIN devotes to serve market-leading customers with our world-leading technologies in the fast growing markets along the megatrend.

營運結果與展望

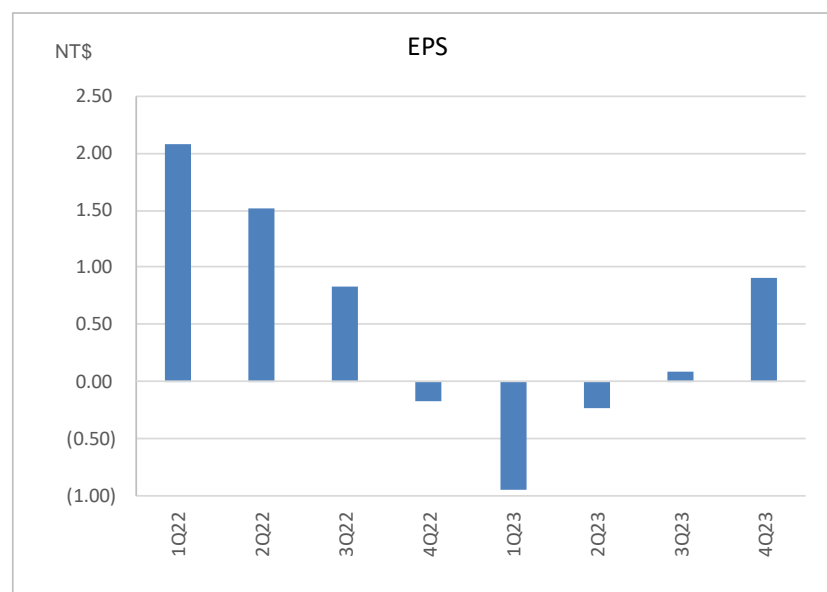
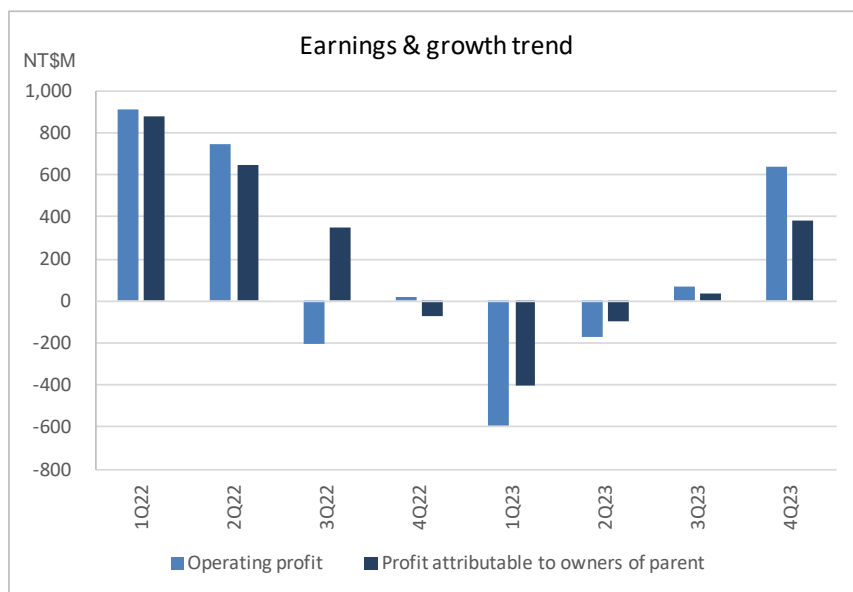
營收及毛利趨勢

- 第四季營收為新台幣48.68億元，較前一季增加17%，較去年同期增加38%。
- 第四季營業毛利率29.4%，營業淨利率為13.1%，分別較前一季增加7.3及11.4個百分點，主要為產能利用率持續提升所致。



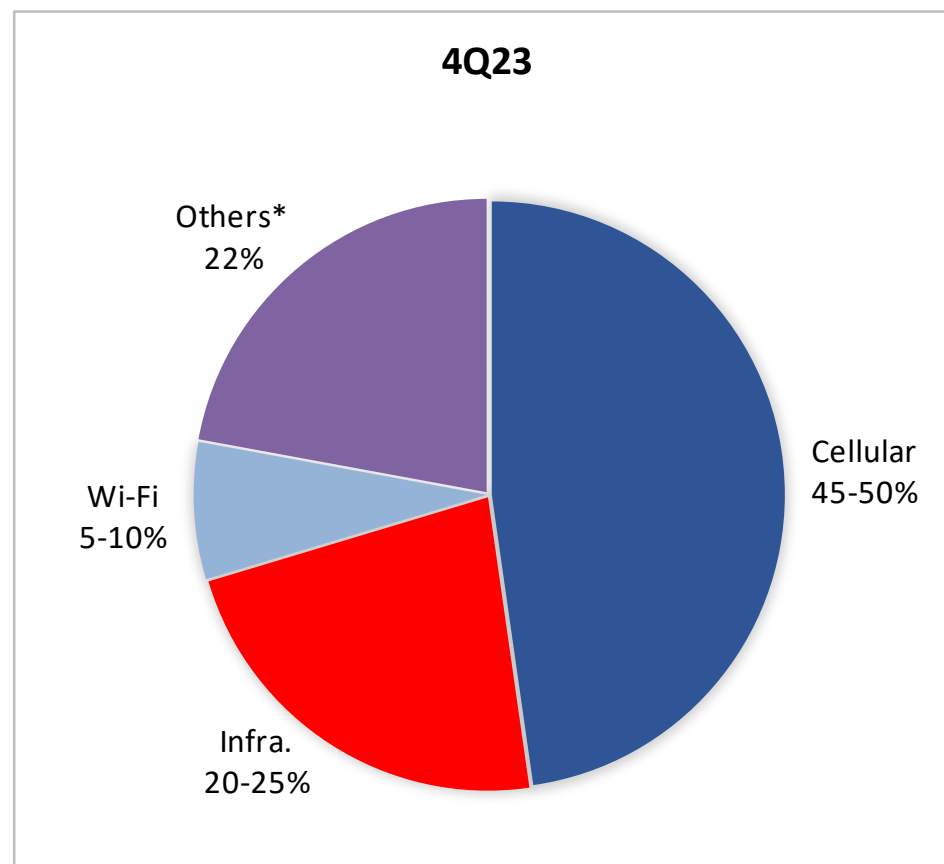
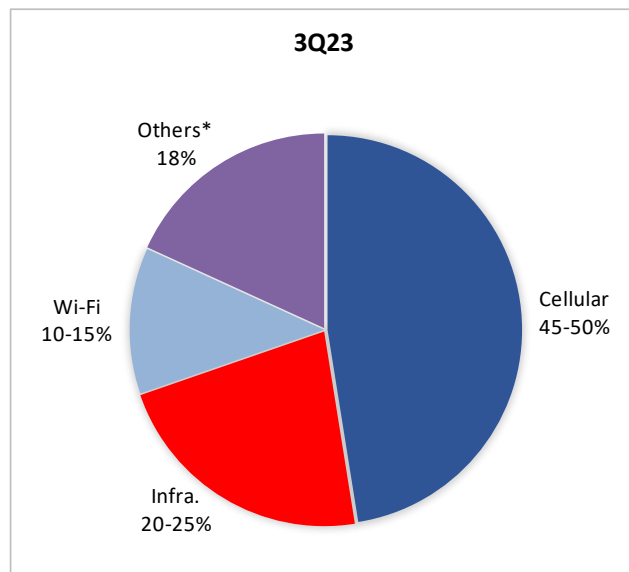
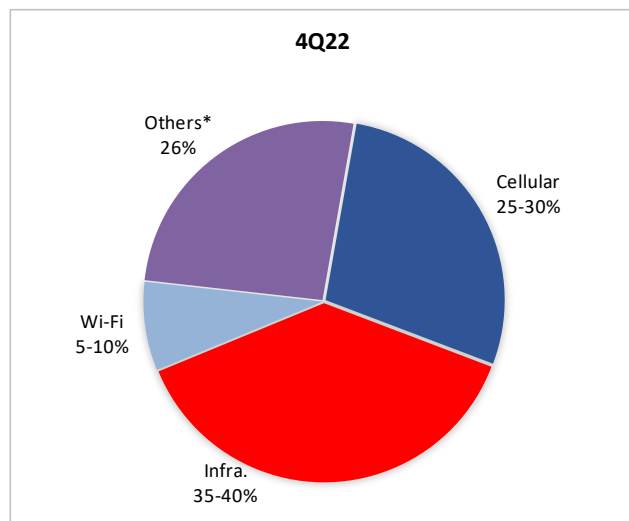
Source: Company.

- 第四季隨著產能利用率持續回升，歸屬於母公司淨利為NT\$3.85億元，前一季為NT\$3,400萬元；第四季EPS為NT\$0.91元，前一季為NT\$0.08元。



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.

- 2024年第一季營收預計較前一季下滑 low-teens 百分比。
- 2024年第一季毛利率預計約為 mid-twenties 的水準。

附件 - 財務狀況

合併綜合損益表 - 第四季

(新台幣 百萬元)	4Q'22	3Q'23	4Q'23 (自結數)	QoQ	YoY
營業收入	3,531	4,165	4,868	+17%	+38%
營業毛利	786	919	1,433	+56%	+82%
營業毛利率(%)	22.2%	22.1%	29.4%		
營業費用	(765)	(849)	(794)	-7%	+4%
營業費用率(%)	-22%	-20%	-16%		
營業淨利	21	70	639	+812%	+2991%
營業淨利率(%)	0.6%	1.7%	13.1%		
營業外收支淨額	(154)	(114)	(357)		
稅前淨利(損)	(133)	(44)	282	-	-
所得稅費用	(28)	(37)	(5)		
本期淨利(損)	(161)	(81)	278	-	-
淨利(損)率(%)	-4.6%	-1.9%	5.7%		
其他綜合損益(稅後淨額)	27	871	212		
綜合損益總額	(134)	790	490	-38%	-
本期淨利(損)歸屬於母公司業主	(76)	34	385	+1031%	-
每股純益(元)	(0.18)	0.08	0.91	+1038%	-
年化ROE(%)	-1%	0.4%	5%		
約當產能利用率 (%)	30%	50%	60%		
折舊費用	1,017	1,182	1,190		
資本支出	916	1,880	252		

合併綜合損益表 - 年度

(新台幣 百萬元)	2022Y	2023Y (自結數)	YoY
營業收入	18,334	15,836	-14%
營業毛利	4,725	3,469	-27%
營業毛利率(%)	25.8%	21.9%	
營業費用	(3,241)	(3,525)	+9%
營業費用率(%)	-18%	-22%	
營業淨利(損)	1,484	(56)	-
營業淨利(損)率(%)	8.1%	-0.4%	
營業外收支淨額	342	(623)	
稅前淨利(損)	1,826	(679)	-
所得稅(費用)利益	(411)	121	
本期淨利(損)	1,414	(558)	-
淨利(損)率(%)	7.7%	-3.5%	
其他綜合損益(稅後淨額)	84	1,762	
綜合損益總額	1,498	1,204	-20%
本期淨利(損)歸屬於母公司業主	1,802	(80)	-
每股純益(元)	4.25	(0.19)	-
年化ROE(%)	5%	-0.2%	
約當產能利用率 (%)	50%	45%	
折舊費用	4,164	4,621	
資本支出	7,124	3,209	

營業外收支

(新台幣 百萬元)	4Q'22	4Q'23 (自結數)	2022Y	2023Y (自結數)
外幣兌換損益	(255)	(68)	254	(846)
處分不動產、廠房及設備損益	(226)	(1)	(190)	(19)
買回應付公司債利益	241	104	601	817
透過損益按公允價值衡量之金融資產及負債淨損益	(17)	(90)	(577)	(63)
採用權益法認列之關聯企業及合資損益之份額	106	44	320	39
財務成本	(95)	(181)	(341)	(665)
其他	92	(164)	276	115
總計	(154)	(357)	342	(623)

合併資產負債表

(新台幣 百萬元) 重要科目	2022/12/31		2023/9/30		2023/12/31 (自結數)	
	\$	%	\$	%	\$	%
現金及約當現金	10,380	15%	6,352	10%	10,326	15%
透過損益按公允價值衡量之金融資產-流動	121	0.2%	143	0.2%	143	0.2%
應收票據及帳款淨額	917	1%	1,206	2%	1,149	2%
存貨	5,420	8%	5,157	8%	5,111	7%
長期投資	14,376	21%	15,643	24%	16,061	23%
不動產、廠房及設備	34,360	50%	33,964	51%	32,738	47%
資產總計	69,128	100%	66,081	100%	69,168	100%
流動負債	6,247		13,740		12,724	
一年內可執行賣回權公司債	-		5,272		4,744	
一年內到期之長期借款	1,731		3,518		2,997	
應付公司債	10,670		-		-	
長期借款	15,870		16,398		20,030	
負債總額	33,939	49%	31,224	47%	33,819	49%
普通股股本	4,239		4,239		4,239	
歸屬於母公司業主之權益	33,329		33,323		33,955	
權益總計	35,190	51%	34,857	53%	35,349	51%
每股淨值(元) ¹	78.62		78.60		80.09	
重要財務指標						
流動比率	276%		97%		135%	
負債比率	49%		47%		49%	

¹ 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

For all inquiries, suggestions, and comments
ir@winfoundry.com

