



*Compound Semiconductor Solutions
from RF to Lightwave*

穩懋半導體

穩懋半導體公司簡介

2022年5-7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
- 新技術開發
- 營運結果與展望
- Q&A

產業概況



5G + Wi-Fi



Satellite

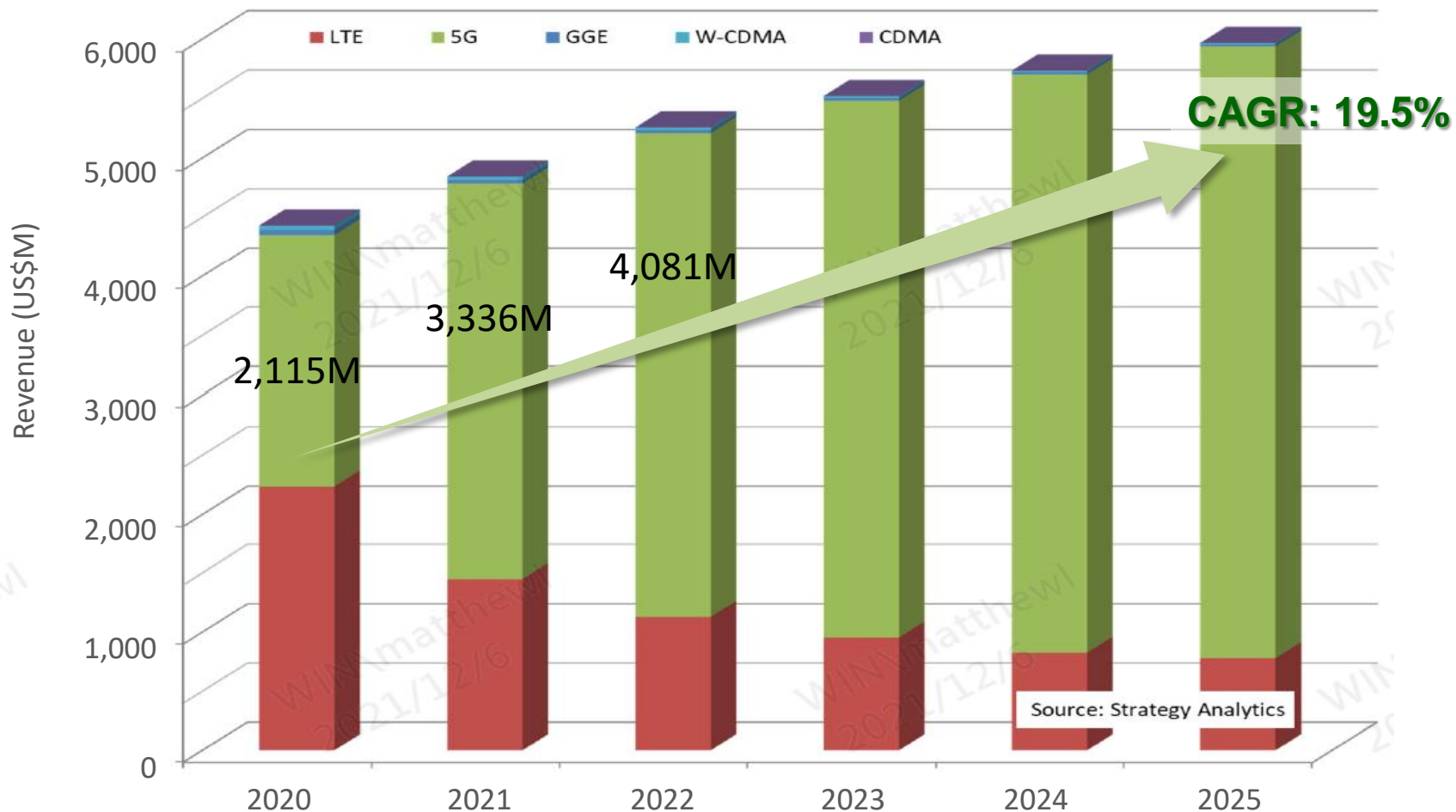


Optical
Devices

未來展望

- 4G、5G並存，動能擴大，Cellular及Infra產品大量生產中，持續耕耘新世代技術
- 提升Wi-Fi 6&6E市場滲透率，Wi-Fi 7所需相應技術積極發展中
- 低軌道衛星整合陸海空無縫連網，衛星通訊需求強勁
- VCSEL製造技術及品質領先，3D及近接感測應用擴大，車用內部傳感產品成功交付
- InP光電產品包含接收器及其他雷射元件，與潛力客戶積極合作，發展LiDAR應用

Merchant RF GaAs MMIC Revenue for Cellular Terminals





Wi-Fi 6E 市場滲透率提升

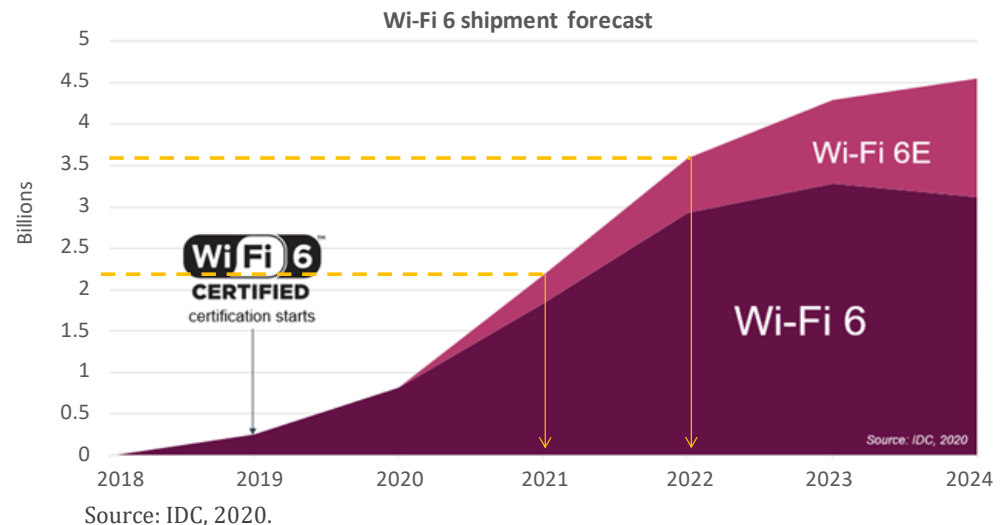


Wi-Fi 6 & 6E new frequency band and penetration rate growth



- Wi-Fi 6E (6-7 GHz) needs superior frequency & high linearity performance which is a challenge to semiconductor.
- GaAs' outstanding characteristics can fulfill the critical requirement of Wi-Fi 6E.

- More than 3.5 billion Wi-Fi 6 product shipments in 2022, growing to 79% of product shipments.
- Nearly 20% of all Wi-Fi 6 device shipments will support 6 GHz by 2022.
- 5.2 billion Wi-Fi 6 product shipments by 2025, 41% of which will be Wi-Fi 6E.



- **Wi-Fi 7: Expect more complex modulation, wider bandwidth and higher frequency.**
 - GaAs shows higher linearity (1K to 4K QAM) & operation freq. for complex modulation.
 - More MIMO requirements (from 8x8 to 16x16)
- **WIN is developing advanced HBT for Wi-Fi 7.**

衛星之多層次網路



- **營收市場增大** ~December 21, 2021 MarketsandMarkets
 - The SATCOM on the move market is projected to grow from US\$ 17.7 billion in 2021 to USD 42.8 billion by 2026, at a CAGR of 19.3%.
- **數據傳輸增加** ~December 6, 2021 NSR Report
 - The space data volumes are expected to increase 14x, and it will reach more than 500 exabytes of information from 2020 to 2030.

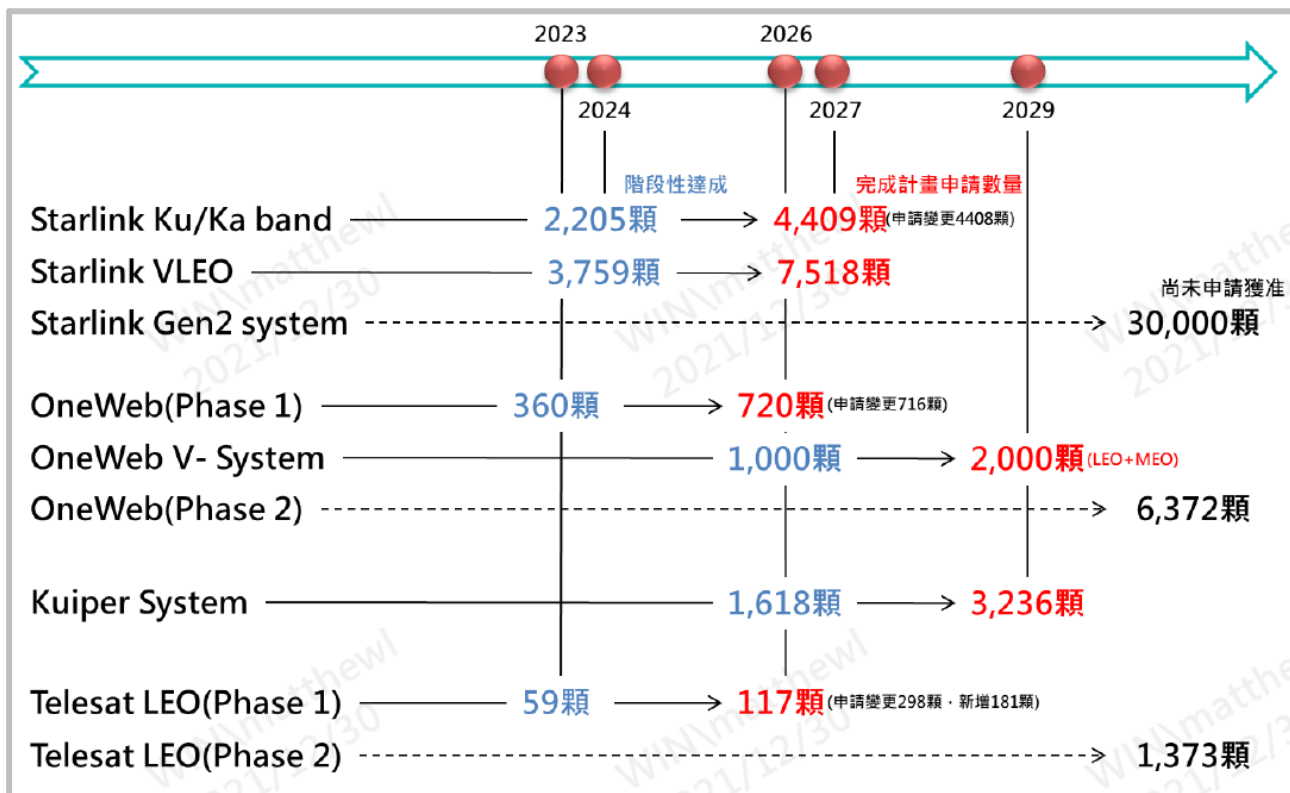
全球低軌通訊衛星星系計畫，目前向聯邦通訊委員會(FCC)所遞送的非高軌道衛星(NGSO)申請數量，皆突破千顆等級，形成巨型星系(Mega-constellation)。

美國
SpaceX Starlink

英國
OneWeb

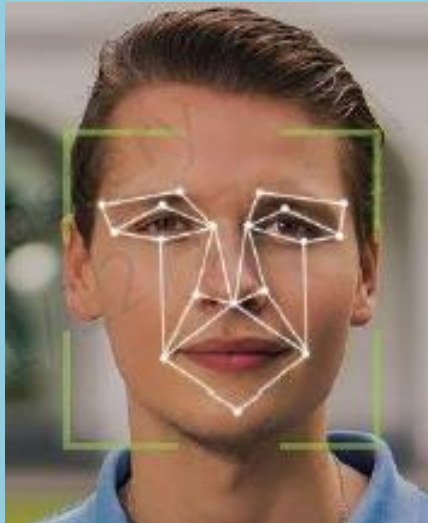
美國
Amazon Kuiper

加拿大
Telesat



資料來源：工研院產科國際所

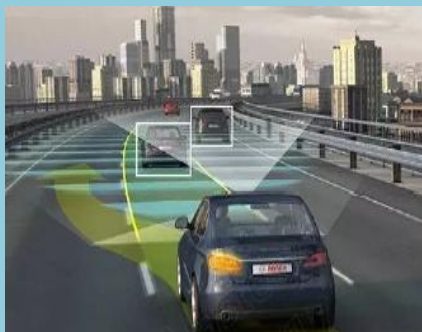
AR/VR



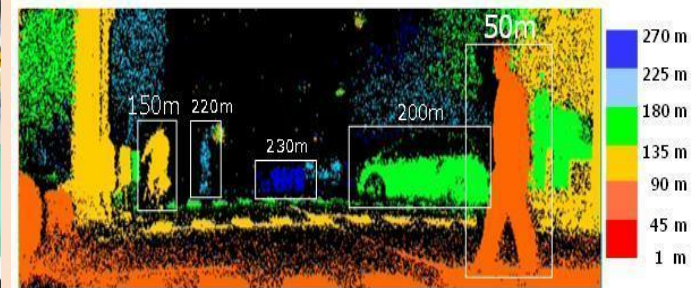
- Structure-Light continuously be used for facial recognition.
- ToF for more 3D sensing applications will keep growing.
 - LiDAR at rear side of smartphone
 - AR/VR Metaverse
 - Proximity sensor
 - Camera focus assistant



LiDAR

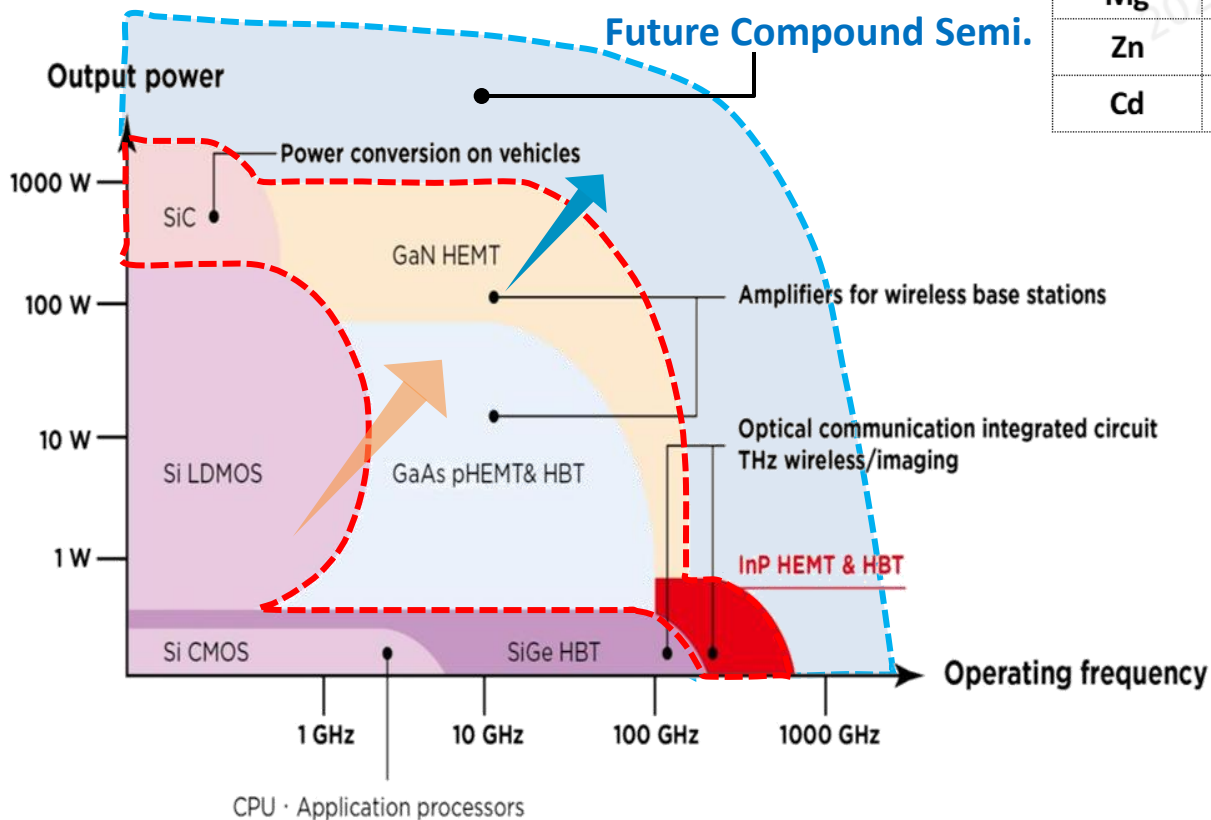


- **ToF for LiDAR applications will keep growing.**
 - High-power infrared VCSEL is in production for automotive applications. (in-vehicle sensing device DMS/OMS駕駛及乘員監控系統)
 - 150-200m long range LiDAR for robotaxis and passenger cars is in pilot stage.
 - AGV (Automated Guided Vehicle無軌無人搬運車) is in pilot stage.



新技術開發

化合物半導體技術發展



Periodic Table

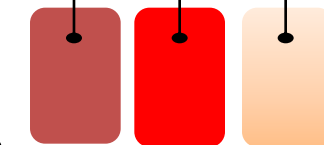
Group II	Group III	Group IV	Group V	Group VI
Be	B	C	N	O
Mg	Al	Si	P	S
Zn	Ga	Ge	As	Se
Cd	In	Sn	Sb	Te

GaAs GaN, InP

1550 ~ 850nm

SWIR

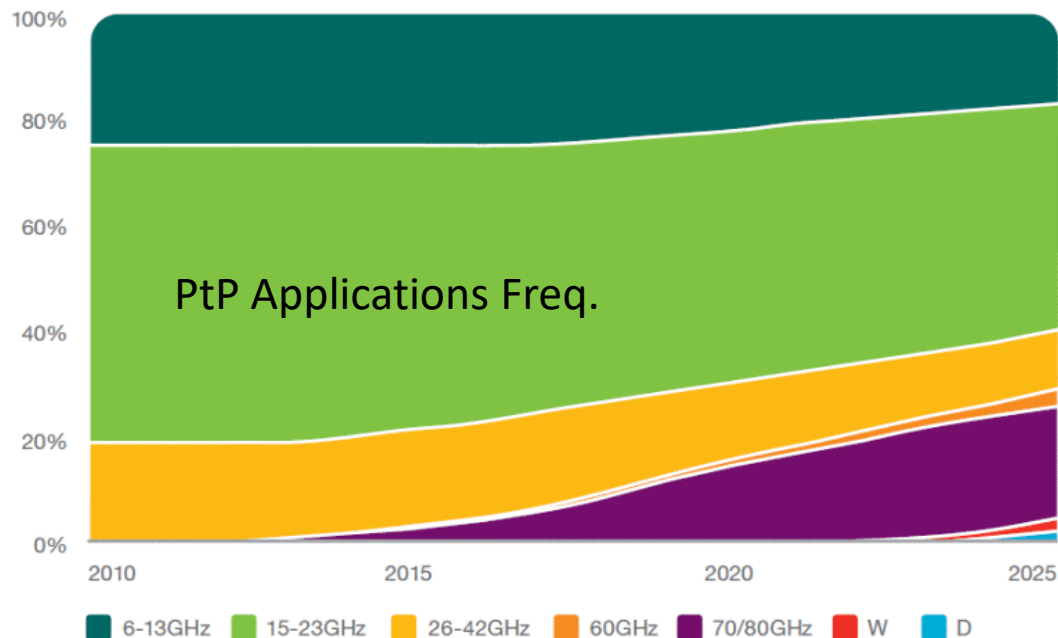
LiDAR Datacom



High speed, Light emitting, Light absorption, Insulating substrate

氮化鎵(GaN) – 無線通訊

- To leverage experienced skills, RF specialty and production advantage, WIN strategically focus on RF GaN market.
- The application market of GaN is about to boom, including satellite, PtP, and other consumer applications.
- WIN's GaN solutions cover DC-40 GHz, which covers most of the applications.



Source: Ericsson

磷化銦(InP) – 光通訊



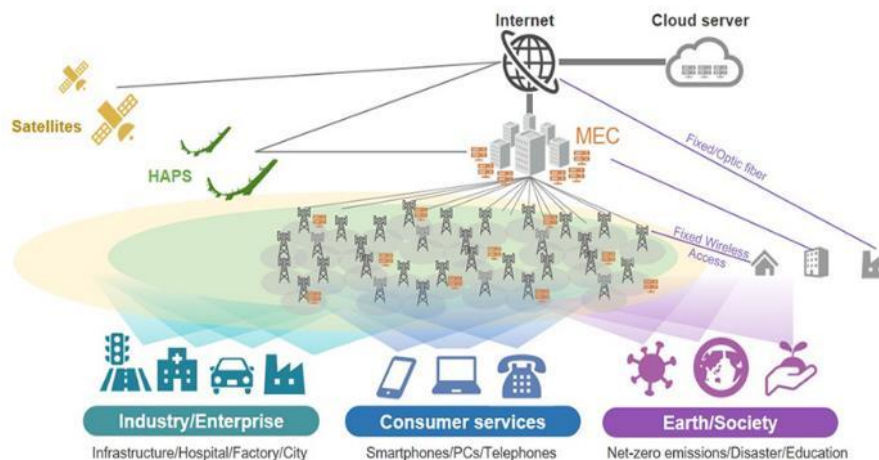
Proximity (近接感測)



SWIR (短波長紅外線)



LiDAR (光達)

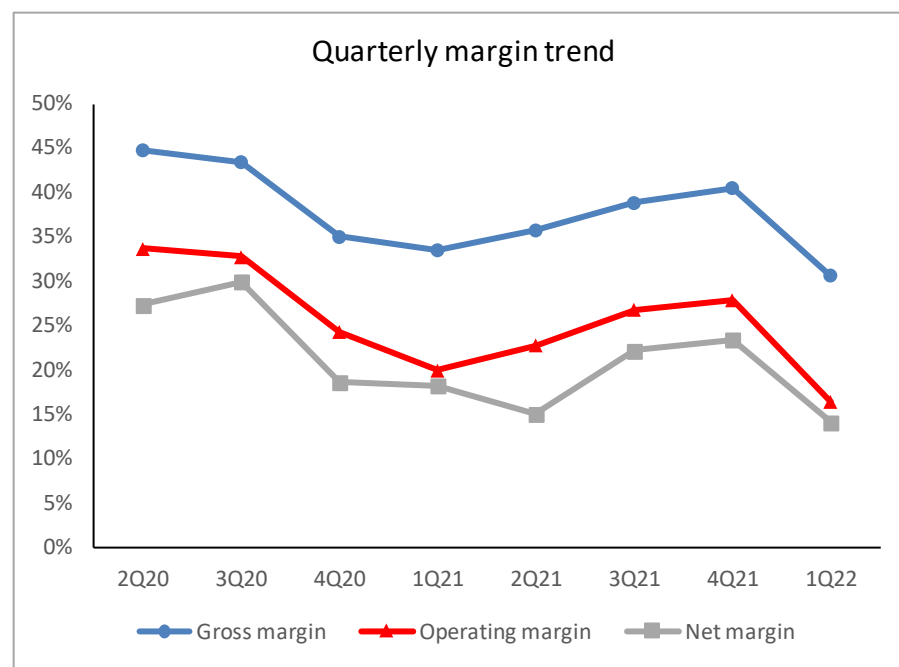
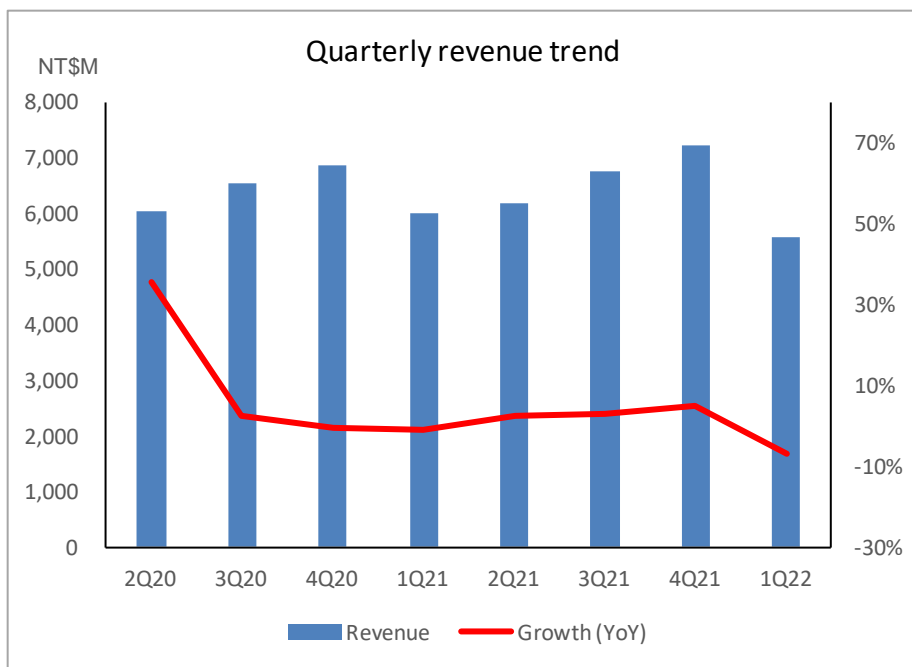


RF THz Applications

營運結果與展望

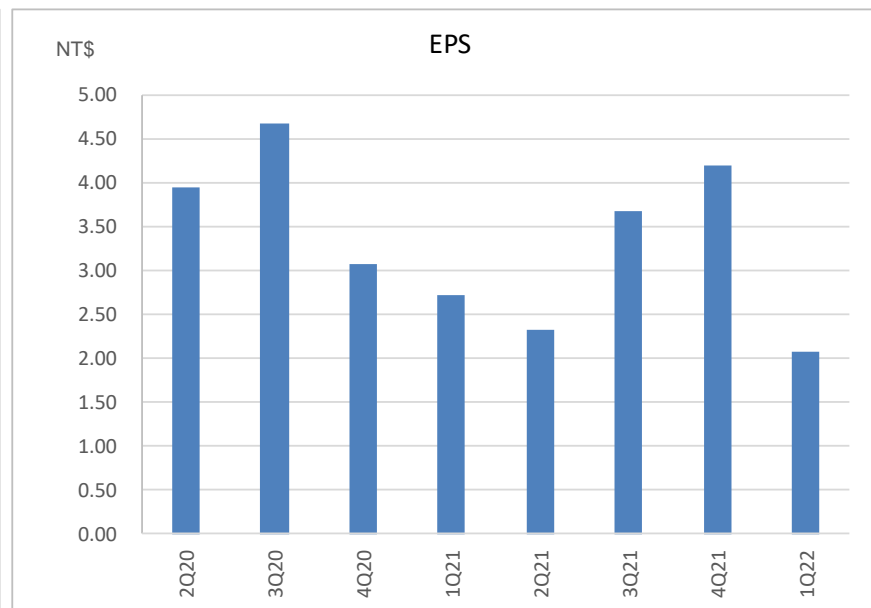
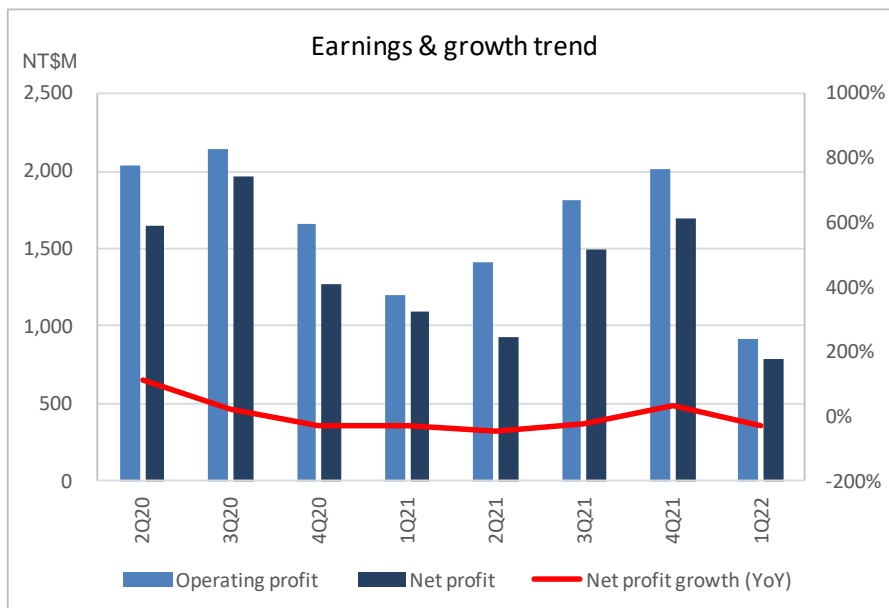
營收及毛利趨勢

- 第一季營收為新台幣55.97億元，較前一季減少22%，較去年同期減少7%。
- 第一季營業毛利率較前一季減少9.9個百分點為30.6%；營業淨利率較前一季減少11.5個百分點為16.4%，主要為產能利用率下滑所致。

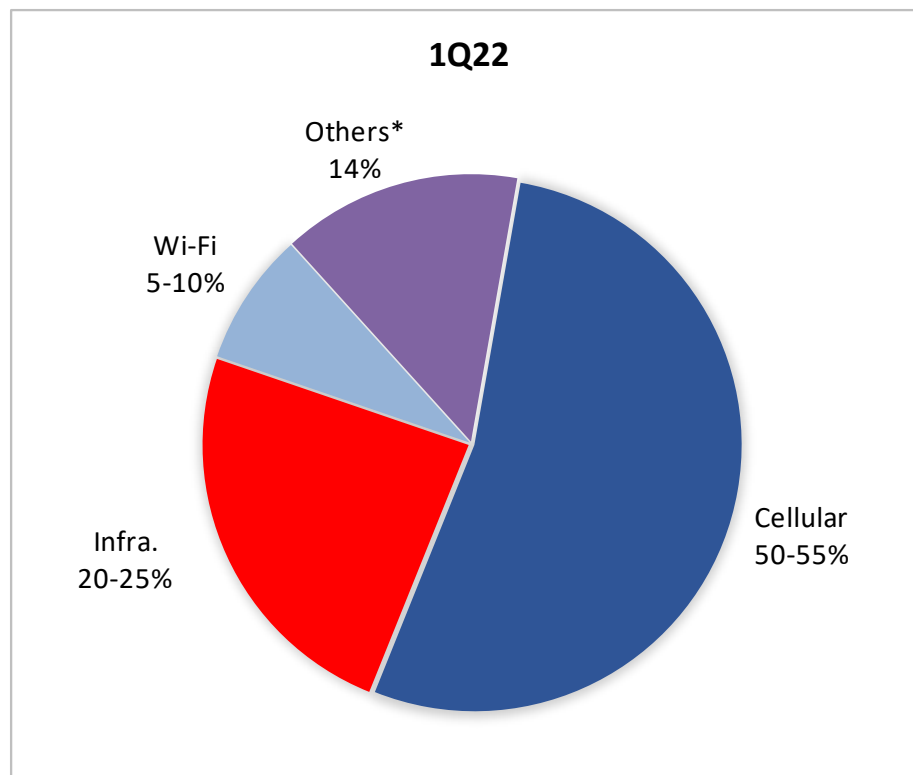
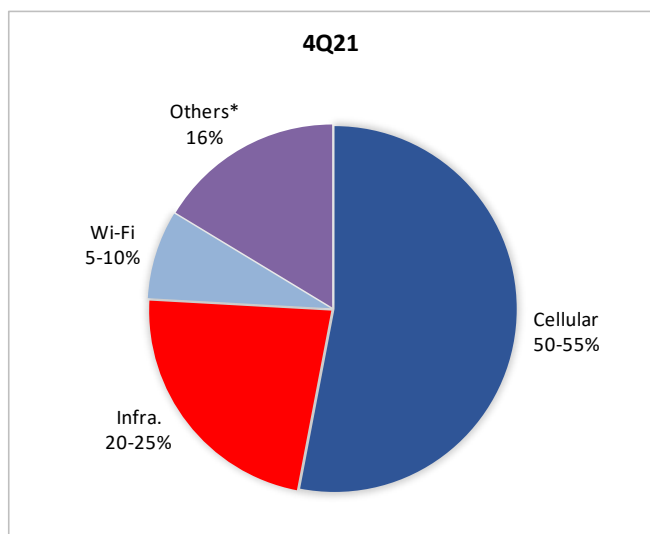
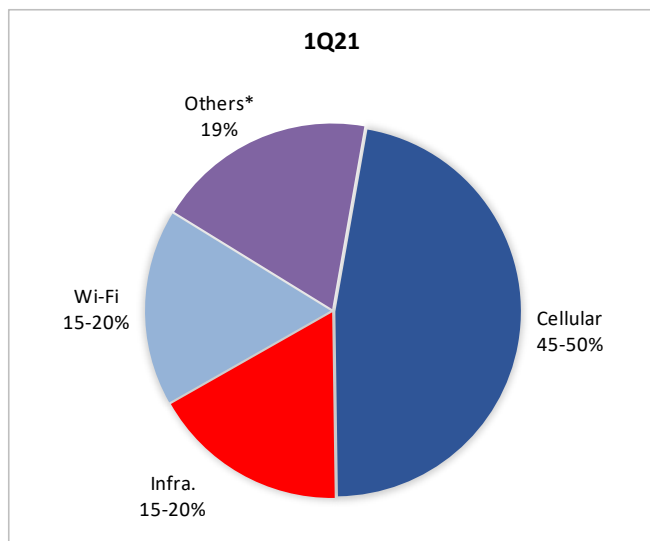


Source: company.

- 第一季淨利為NT\$7.86億元，較前一季減少53%，較去年同期減少28%；第一季EPS為NT\$2.08元，前一季EPS為NT\$4.19元。



Source: company.



* 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.

- 第二季營收預計將較前一季 下滑high-single digit百分比。
- 第二季毛利率預計約落在high-twenties至low-thirties區間的水準。

附件 – 財務狀況

合併綜合損益表 - 第一季

(新台幣 百萬元)	1Q'21	4Q'21	1Q'22 (核閱數)	QoQ	YoY
營業收入	6,009	7,217	5,597	-22%	-7%
營業毛利	2,012	2,923	1,714	-41%	-15%
營業毛利率(%)	33.5%	40.5%	30.6%		
營業費用	(816)	(914)	(798)	-13%	-2%
營業費用率(%)	-14%	-13%	-14%		
營業淨利	1,196	2,009	916	-54%	-23%
營業淨利率(%)	19.9%	27.8%	16.4%		
營業外收支淨額	191	41	75		
稅前淨利	1,386	2,049	991	-52%	-29%
本期淨利	1,095	1,690	786	-53%	-28%
淨利率(%)	18.2%	23.4%	14.0%		
每股純益(元)	2.72	4.19	2.08	-50%	-24%
其他綜合損益(稅後淨額)	(14)	380	374		
綜合損益總額	1,081	2,069	1,160	-44%	+7%
年化ROE(%)	14%	21%	10%		
約當產能利用率 (%)	80%	100%	70%		
折舊費用	1,000	1,018	1,058		
資本支出	1,834	2,256	1,320		

營業外收支

(新台幣 百萬元)	1Q'21	1Q'22 (核閱數)
外幣兌換損益	191	339
處分不動產、廠房及設備損益	(5)	(0.1)
透過損益按公允價值衡量之金融資產及負債淨損益	78	(279)
採用權益法認列之關聯企業及合資損益之份額	(39)	61
其他	(34)	(47)
總計	191	75

合併資產負債表

(新台幣 百萬元) 重要科目	2021/3/31		2021/12/31		2022/3/31 (核閱數)	
	\$	%	\$	%	\$	%
現金及約當現金	22,334	32%	16,332	22%	14,207	19%
透過損益按公允價值衡量之金融資產-流動	896	1%	62	0.1%	57	0.1%
應收票據及帳款淨額	1,999	3%	2,718	4%	2,020	3%
存貨	5,945	8%	6,671	9%	6,295	8%
長期投資	8,525	12%	14,414	19%	14,621	20%
不動產、廠房及設備	27,519	39%	30,991	41%	33,003	45%
資產總計	70,149	100%	74,894	100%	74,073	100%
流動負債	11,368		7,215		11,036	
應付公司債	13,160		13,287		13,329	
長期借款	11,536		15,993		13,520	
負債總額	36,919	53%	37,772	50%	39,177	53%
普通股股本	4,240		4,240		4,240	
歸屬於母公司業主之權益	31,643		34,938		32,739	
權益總計	33,230	47%	37,122	50%	34,896	47%
每股淨值(元) ¹	74.62		82.41		77.22	
重要財務指標						
流動比率	279%		367%		210%	
負債比率	53%		50%		53%	

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
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For all inquiries, suggestions, and comments
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